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A SECOND SERIES OF CASES ILLUSTRATING THE EXCLUSION OF TUBERCULOSIS IN DIAGNOSIS.*

By F. Guy Griffiths, M.D.,

Honorary Physician to the Royal North Shore Hospital of Sydney, and to the Anti-tuberculosis Dispensary of the National Association for the Prevention and Cure of Consumption.

It is frequently stated in Sydney that tuberculous infection is so common as to be almost universal. Were this so it would probably be useless to test patients with tuberculin in order to determine whether or not they were tubercular.

Did every one react, the test would not discriminate between the affected and the non-affected.

Now, whatever may be the case in Germany and Austria, where the mortality from tuberculosis is four or five times as high as it is in New South Wales, including Sydney—for, during the last eight or ten years, the death-rate in the city has been reduced until it is no longer appreciably higher than in the country—it is nevertheless true that in New South Wales only a small proportion of persons react to tuberculin tests.

Four years ago I published a series of cases showing that a large number of persons suffering from diseases other than tuberculosis did not react to tuberculin, and that many of the apparently healthy relatives of consumptives were also unaffected by the diagnostic injections.

Even among the relatives and housemates of consumptives, the honorary physicians of the Anti-tuberculosis Dispensary could find less than 50% (42.15%) who reacted to tuberculin.

After the publication by Dr. Littlejohn of an extensive investigation from which he concluded that only 5.5% of 418 patients in the medical wards of the Children's Hospital reacted to tuberculin, and that a number of patients with supposed surgical tuberculosis did not react, some of whom were proved by their subsequent histories to be free from tuberculosis, it seems scarcely ingenuous to repeat the assertions of universal tuberculous infection.

The following case histories indicate how, by the use of Koch's test, one may determine that any symptoms the patient has are due to some cause other than tuberculosis. The technique of applying the test is fully described in my previous paper.

(35) A.E.B., aged 34, attended at the Anti-tuberculosis Dispensary on January 13, 1914, complaining of cough, expectoration, repeated hæmoptysis and shortness of breath.

His history was that two or three years previously he had consulted a doctor for cough and hæmoptysis and been sent to Wentworth Falls Sanatorium, where he was tested and did not re-act.

Dr. Baret, formerly resident physician at Wentworth Falls, kindly informed me that he had tested this patient with old tuberculin up to 10 mgrms. (.01 c.cm.) with a doubtful reaction, and absolutely no reaction on repeating the dose; all the pulmonary symptoms disappeared after rest, and he diagnosed cardiac valvular disease, and discharged him.

When I saw him the patient obviously had advanced morbus cordis, with a doubtful thrill over the ventricle, intermittent pulse, and signs of slight diffuse pulmonary congestion.

His sputum was examined and no tubercle bacilli were found.

I tested him by von Pirquet's method with undiluted old tuberculin and he did not react, nor did he to subcutaneous injections of one and five milligrams (.001 and .055 c.cm.) of old tuberculin.

Some month later I learned that he had died of heart disease.

(36) J.M., aged 13, was seen at the Anti-tuberculosis Dispensary on October 31, 1912. She had lived in the same house and in close association with a patient in advanced consumption, who was sent a few days before to Waterfall Sanatorium. She was a sister of No. 37, and had had a cough for three weeks, did not look ill, but had suspicious breathing at the apex of the left lung. She was tested with old tuberculin, 1, 5 and 10 mgrms., and felt no reaction at all. A month later she was very well, had lost her cough, and gained 2½ lbs. in weight.

(37) M.M., aged 19 (seen at the Anti-tuberculosis Dispensary, October 31, 1912). She was the sister of No. 36, and, like her, lived with a consumptive. She did not complain of ill-health, but had a slight deformity of the left hip, apparently congenital and hereditary (her mother having a similar deformity), and some infiltration of the apex of the right lung. She did not react to 1, 5 and 10 mgrms. of old tuberculin injected subcutaneously, and a month later was quite well, working hard all day in a boot factory, and walking two miles each way to and from work.

(38) J.A., aged 19, attended at the Anti-tuberculosis Dispensary, January 16, 1913. He felt well, and had no cough, but lived with his father, who has tuberculosis of the lungs and larynx, with numerous bacilli in his sputum. He was tested with 1, 5 and 10 mgrms. of old tuberculin without reaction.

(39) G.K., aged 5, attended at the Anti-tuberculosis Dispensary, June 24, 1913. He had had lumps below his left jaw for some months, larger lately, since he got a cold. His mother has open tuberculosis of the lungs and larynx. A chain of enlarged lymphatic glands in both right and left anterior triangles of the neck. No reaction followed after ½ of mgm. of old tuberculin, nor after 1 and 3 mgrms.

During the next month the patient gained 3 lbs. in weight, and the glands became smaller.

*Read before a meeting of the New South Wales Branch of the British Medical Association, on December 11, 1914.

Being an article in continuation of a communication read before the New South Wales Branch of the British Medical Association, and published in the *Australasian Medical Gazette*, 1910, p. 411.

Eighteen months later he was very well, and the glands were much smaller.

(40) A.McD., aged 6, attended at the Anti-tuberculosis Dispensary, November 18, 1913, on account of sore throat and swelling of the glands of the neck. His brother has tuberculosis of the knee. He was tested with old tuberculin, $\frac{1}{2}$, 2 and 5 mgms. without reaction. Nine months later he was 5 lbs. heavier. He was tested again with .0003, .0015, .003, .005 and .008 c.cm. of old tuberculin without reaction. He gained 2 lbs. in weight during the test, and was well in November, 1914.

(41) A.C., aged 14, attended at the Anti-tuberculosis Dispensary on January 13, 1914, for languor and slight cough. Her father had consumption. She was tested with $\frac{1}{2}$, 1, 5 and 10 mgms. After the last injection the temperature rose 0.5° ; four days later the dose was repeated without any effect. She gained $1\frac{1}{2}$ lbs. during the test.

(42) Mr. F.C., aged 21, was under my care on July 8, 1912. He had had pleurisy and hæmoptysis 12 months before, and recently shortness of breath and hæmoptysis. There were suspicion signs at the right apex, but the general health was good. An X-ray examination was made with Dr. L. H. Harris, but nothing abnormal was found. He was tested with old tuberculin, 1, 5 and 10 mgms. without any effect of any kind, not even soreness in the arm. He was still well two years later. (?)

(43) Miss E.F., aged 8 years, was sent for examination by her uncle, a medical man, on account of lack of energy, liability to colds, sickly breath, and conjunctivitis which he thought might be tuberculous, on August 28, 1911. Some time earlier another doctor had said that one lung was weak. Jerky, indefinite breathing at the left apex and rough breath sounds or friction rub at the right base were detected. She was tested with old tuberculin 0.3, 1 and 6 mgms. without any effect at all, except that both she and her mother thought her health much improved. She was treated with a simple tonic, and no signs of tuberculosis have developed up to the present (November, 1914).

(44) Mrs. C., aged 25, was seen by me on October 2, 1913. She gave a history of hæmoptysis, about a cupful, 18 months before, pleurisy twice, nine months and three months before, and continuous cough and expectoration since. She had lost a stone in weight. Her own doctor found dulness and prolonged expiration at the right apex, and naturally diagnosed pulmonary tuberculosis. What history could be more typical? He sent her to me for treatment. I found dulness, broncho-vesicular breathing, râles and pectoriloquy at the right apex.

Although there seemed no doubt of the nature of the disease, I decided that I would follow my usual practice of examining the sputum, and, if necessary, testing with tuberculin before commencing a course of treatment. I found no tubercle bacilli. I tested her with subcutaneous injections of old tuberculin, 1, 5 and 10 mgms. at intervals of two days. She showed no sign of reaction. Dr. Harris and I examined her with X-rays, and we found within the lightly mottled shadow of the lung the dark, round, sharply defined shadow of

a hydatid deeply situated on the upper part of the right lung. Her joy and gratitude on being told that there was no danger of her infecting her babies was very great.

I have recorded other cases of hydatid of the lung masquerading as tuberculosis in a separate paper.

(45) Master J.G., aged 4, was brought to me in July, 1911. He was a delicate child, had had typhoid fever a year previously, and there was a bad family history of tuberculosis. He was tested with old tuberculin .00025 c.cm., .00125 c.cm., and .004 c.cm. (i.e., 4 mgms.), but no sign of any reaction appeared, and the arm was not at all sore. The temperature remained normal. He has been well since, except for measles and varicella, and is now well grown and healthy (December, 1914).

(46) Miss N.G., aged 11, a sister of (45), was a thin, pale child, and a mouth breather, when seen in July, 1914. She suffered from frequent sore throat and colds. The family history was bad. When examined she had acute tonsillitis with cough and dyspnoea and fever to 101.4° or 101.6° for several days in succession. Adenoids had been removed seven years before.

She was tested with 0.5, 2 and 5 mgms. of old tuberculin, with no sign of reaction; on the contrary, she felt better, and the temperature became normal.

Dr. Brady kindly enucleated her tonsils, and enretted away some adenoid tissue from the nasopharynx, and her health improved rapidly.

(47) Master L.W., aged 8, was sent to me in August, 1914, for examination and test, as he was listless and heavy-eyed, and had occasional night sweats, and it was thought he had tuberculosis. I found him bright and active, but easily tired, and very thin and pale. Indeterminate breathing and increased vocal resonance at the right apex were noted. I injected .0003, .0015, .005 c.cm. of old tuberculin subcutaneously, but no sign of reaction followed. The little patient gained 1 lb. in weight during the test.

(48) Mr. F. McD., aged 53, had an attack of hæmoptysis in January, 1913; this recurred from time to time, and a severe attack took place in August, 1913, when over a pint of blood was lost. In September he had a cough, and had lost one stone in weight. His chest was long, narrow, and flat, the expansion was poor, and broncho-vesicular breath sounds and râles were heard at the right apex. He was tested with old tuberculin, 1, 5 and 10 mgms.; no soreness in the arm nor general reaction followed. The fluorescent screen showed great retraction and lessened mobility of the right half of the diaphragm and thickening about the hilum of the right lung, but no sign of hydatid. In the following six months he gained 12 lbs. in weight, and was tested again with 1, 5, 15, and 45 mgms. (.045 c.cm.) of old tuberculin, with a negative result. In July, 1914, he was better still.

(49) Mr. J. M., aged 26, was seen by me in September, 1914. He stated that he had suffered from colds on and off for 10 years; they were worse dur-

ing the last few months. He had a troublesome cough, sore throat and rash on the chest. On examination I found granular pharyngitis, a very copious, flat, shiny, bright scarlet, papular, scaly rash (apparently eczema seborrhoeicum) on the chest, harsh breathing and doubtful diminution of the percussion note at the right apex. He was tested with 1, 5 and 15 mgms. of old tuberculin without any reaction. The pharyngitis and eczema disappeared under appropriate treatment.

(50) Mr. F. T., aged 19, had always been slight, but in fairly good health up till January, 1914, when he suffered from cough and increased languor, and noticed that his chest had sunken in. As he had lived with an uncle who had open pulmonary tuberculosis, his father suspected that he had contracted the same disease. In August he was thin and pale, but his appetite and digestion were fairly good. There was no polydipsia nor polyuria. The urine was pale, clear, and acid; the specific gravity was 1022. It did not contain albumin, but reduced Fehling's solution. He was tested with old tuberculin 1, 5 and 10 mgms. at intervals of two days, without any sign of reaction. His urine was measured, and found to vary from $2\frac{1}{2}$ to $3\frac{1}{2}$ pints in the 24 hours; 4.5 c.cm., decolorized 10 c.cm. of Pavy's solution; it therefore contained about 25 grains of glucose in $2\frac{1}{2}$ pints. I told him that he had no sign of consumption, explained the cause of his ill-health, and placed him on a sugar-free diet. He gained 6 lbs. in six weeks.

(51) Mr. R. S., aged 48, suffered from cough, tightness in the chest, and frequent attacks of bronchitis for ten years. There was no loss of weight. The general health was fairly good, but he complained of flatulent indigestion. When seen in August, 1914, he was coughing up copious thick sanious sputum. No tubercle bacilli were found. Tested with old tuberculin, 1, 5 and 10 mgms.; no sign of reaction followed.

(52) Miss D. B., aged 17, caught a cold in June, 1913; the cough persisted up to October 20, 1913, when I examined her. There were occasional specks of blood in the morning sputum. She had lost weight from 9 stone 12 lbs., to 8 stone 5 lbs., and had grown pale. I tested her with old tuberculin, 1, 5 and 10 mgms., without any sign of reaction. No definite signs of lung disease were discovered on X-ray examination. She was treated with cod-liver oil and compound Bland's pill, and a month later was of much better colour, and had gained $3\frac{1}{2}$ lbs. in weight.

(53) Mr. J. B., aged 25, complained in April, 1914, of loss of weight, slight cough, and pain in the chest. There was no expectoration. His wife had open pulmonary tuberculosis. He was tested with old tuberculin, 1, 5 and 10 mgms. without any sign at all of reaction. Four months later he was very well.

(54) Master G. B., aged 6, was seen on January 16, 1913. He had had four attacks of pneumonia in the previous seven months, and had been left very weak. The family doctor sent him to me some hundreds of miles from the country for the test. Old tuberculin, .0002, .001, and .003 c.cm. was injected without any effect.

(55) Mr. H. de S., aged 25, complained in October of 1913 of "catarrh" and slight cough. The breathing was feeble and jerky. The patient came to be tested as he contemplated matrimony. One and 5 mgms. of old tuberculin were injected without effect; after 10 mgms. the arm was slightly swollen, but no other effect was noted; after a second dose of 10 mgms. two days later no reaction followed. He decided to risk marriage.

(56) Mrs. F., aged 66, consulted me in August, 1912. She had had severe influenza two years before, and had caught cold again in August of 1911. Since that time she had had a very troublesome cough, but her general health remained good, and there was no loss of weight. There was a very severe clanging cough. Dulness was detected behind the sternum. There was a little oedema of the feet, but no albuminuria. She did not wish to have subcutaneous injection, so I applied von Pirquet's test with undiluted tuberculin without effect. An X-ray examination showed some enlargement and slight clubbing of the upper end of the aorta, but there were no pulmonary shadows. Her arterio-sclerosis led to a fatal termination several months later.

(57) Master E. F., aged 13, was under treatment on November 7, 1911. He had good health up to August, 1910, and then got pain in the left hip, which was diagnosed as tuberculous; he had been kept in bed, with his leg on a splint since that time. His leg had wasted, and the hip was ankylosed. Five months previously he had occasional pains in other joints, and swelling of the first phalanx of the right little finger. Six or eight weeks before, swelling occurred in both ankles, both elbows, the left wrist, and the right knee, and great stiffness in the jaw, so that he could separate his upper and lower teeth only about one-quarter of an inch. There were no sinuses about any of the joints. I was asked to see him in order to institute tuberculin treatment. I thought, however, that the disease was arthritis deformans, and suggested a preliminary test. I prepared three doses of old tuberculin, $\frac{1}{2}$, 2 and 5 mgms., and sent them to his own doctor, who injected them; suppuration occurred at the site of the injections, with fever from 101° to 101.6° , but no pains in the joints and no headache. I have never seen suppuration after a dose of tuberculin that I have injected myself, and this is the only case I know of in which it occurred after the injection by another practitioner of doses which I had prepared; possibly it was due to bacteria in the circulation which developed in the "locus minoris resistentiae." Fifteen months later, after prolonged treatment as for arthritis deformans, he appeared in much the same condition.

(58) Master H. G., aged 16, had a slight cough and loss of weight, but was otherwise well and strong; his sister, however, was suffering from consumption. I tested him in April, 1910, with old tuberculin, 1, 5 and 10 mgms. without any effect, and again eight months later with 1, 5, 15 and 30 mgms. without any reaction. In December, 1914, he was still well.

(59) Miss I. J., aged 25, was sent to me in February, 1913, from a country town 400 or 500 miles distant. She had had pleurisy 14 months before, and had not been well since; she had lost 2 stone in

weight, had a troublesome cough, especially in the morning, and copious expectoration; at times she vomited. I could find no tubercle bacilli in her sputum; her uterus was enlarged to the size of a four months' pregnancy, and her temperature ran up to 100° in the evening. After a fortnight's rest, which allayed the fever, I tested her with old tuberculin, 1, 4, 10 and again 10 mgms. without any reaction, but she gained 9 lbs. in weight. Dr. Harris examined her with X-rays, and found some thickening about the hilum of the right lung, but nothing else. In September she came again to see me, and brought with her her healthy six-weeks'-old baby. Her pulmonary condition was rather better, and the sputum much less copious.

(60) Miss J. P., aged 5, was sent to me in March, 1911, to be tested by her uncle, a medical practitioner, as she had had bronchitis for two years. She was thin and pale, and had doubtful signs at the right apex. I gave her .00015, .0005, .001, and .004 c.cm. of old tuberculin without any sign of reaction. Three years later she was much better.

(61) Mr. A. P., aged 39, was sent to be by his own doctor, in January, 1912. There was pain in the chest, cough, weakness, blood spitting, dulness and contraction of the right side of the chest, with feeble tubular breathing or absence of breath sounds. A few streptococci, but no tubercle bacilli were found in the sputum. Three years ago the left testis had been excised for cancer. I gave him 1, 5 and 10 mgm. of old tuberculin without any headache or increase of temperature, of cough, or expectoration. A month later he got very severe pain in the chest, with pressure symptoms, and died apparently of secondary malignant disease of the lung.

(62) Miss D. R., aged 22, was sent in June, 1913, by her own doctor to be tested, as she had lost a stone in weight in the last six months, and three years ago was in constant attendance on her father till he died of tuberculosis of the larynx and lungs. She had no cough nor expectoration, but abnormal breath sounds in the right lung. She had 1, 4 and 10 mgms. of old tuberculin without any reaction. Fifteen months later she felt better, though not quite well.

(63) T. R., aged 35, complained in May, 1912, of shortness of breath and cough in the morning. He was an ardent devotee of Bacchus. Some congestion at the right apex, and some enlargement of the liver was discovered. One, 5 and 10 mgm. of old tuberculin was injected without any effect. He remained in approximately the same condition for a year, and then died in delirium after a heavy drinking bout.

(64) Mr. J. R., aged 32, was seen in February, 1914. He had a slight cough, and some expectoration, and complained of weakness and loss of weight; he had been told by another doctor that he had a little disease in one lung. An apical systolic cardiac bruit and doubtful thrill were heard, and there was slight congestion of the right lung. I injected 1, 5, 10 and again 10 mgm. of old tuberculin without any sign of reaction. Five months later he was considerably better.

(65) Miss M. S., aged 17, suffered in October, 1913, from a painful lump under the right arm, but was otherwise well. Her brother had been operated

upon twice for glandular tuberculosis, and she and her mother feared that she might have the same disease. She was tested with 1, 3, 10 and 20 mgms. of old tuberculin without reaction. I saw her again in October, 1914: except for some dysmenorrhœa she had been well during the interval; the lump had disappeared without any treatment, and she had gained 7 lbs. in weight.

(66) D. M., aged 14, was sent to Royal North Shore Hospital as a case of early tuberculous meningitis, on September 27, 1913. The patient complained of sharp shooting pain in the back, and of occipital headache; she was thin and pale. I injected 0.5, 4 and 10 mgms. of old tuberculin without effect. After a few days' rest she was sent home better.

(67) C. B., aged 27, sent into the surgical wards of the Royal North Shore Hospital, on September 16, 1913, on account of a painful swelling of the right knee, which began seven years ago after an injury at football. As the patient had been bedridden for some months, tuberculosis was suspected, and I was asked to test him. I gave 1, 5 and 10 mgms. of old tuberculin with no sign of reaction. His blood serum was examined for syphilitic anti-bodies by the Wassermann method with a positive result, and a diagnosis of syphilitic arthritis was made.

These cases are merely a few that I have collected from my case notes. I made no long search, but looked up such as I happened to remember. Did I work systematically through my records I could produce numerous others.

They illustrate that instead of everyone reacting to tuberculin there are many people who do not. Why not? It is generally admitted that those who do react have tuberculosis. It does not necessarily follow that their tuberculosis is the chief cause of their symptoms, and it may happen that immediate treatment is more necessary for the other disease than for the tuberculosis. If the other disease be cancer, chronic Bright's disease, or advanced arteriosclerosis, it may be scarcely worth while instituting long and tedious treatment for the tuberculosis. If the other disease be acute, e.g., measles, pneumonia, typhoid, malaria, it may be necessary to treat it first, and to postpone the specific treatment for tuberculosis. There is a possibility of recovery from the tuberculosis without any specific treatment.

There is ample evidence that animals who react to tuberculin have a tuberculous focus. In November, 1912, the Chairman of the New South Wales Government Tuberculosis Advisory Board had several score of cows, in fact the whole dairy herds of the Newington and Rookwood Asylums, tested, and all those that reacted were killed and examined. In every case, with two possible exceptions, tubercular foci were discovered at the post-mortem examination. The two possible exceptions were cows in which the body temperature was 103° or more before the test. Since in the case of cattle fever alone is relied on as a sign of reaction, the majority of veterinary surgeons refrain from testing cattle that are already feverish. If a cow's temperature be 102.6° four hours before, and 103.2° half an hour before an

injection of tuberculin, it seems rash to conclude that a rise to 104.6° is not due to the same cause as the previous fever, but is due solely to the tuberculin injection. If we agree with most authorities that these two cases should be excluded, the result of the testing of these two herds (209 cows in all) shows that every beast that reacts is suffering from tuberculosis. One member of the Board suggested that the cows that had not reacted should be killed also in order to determine that they were free from tuberculosis. This was not done.

Returning now to the reasons for an absence of reaction in the case of man, they may be:—

1. That the patient has no tuberculosis. I believe that this is the most common reason;
2. That the patient has been treated with tuberculin;
3. That the patient has a rapidly advancing tuberculosis, and so the added dose of tuberculin injected in the test produces no observable effect. Such a patient is usually feverish. If he happens to be afebrile a mistake may be made, and I fear that I may have made one in the case of a patient at North Shore Hospital, whom I tested without reaction, and who died some time later with signs of meningitis.

I believe, however, that such cases must be extremely uncommon, so that if we exclude (2), as we usually can from the patient's history, we may conclude that the absence of a reaction means freedom from tuberculosis. It does not of course imply immunity from infection in the future. Mrs. J., whose case I recorded four years ago as one of doubtful reaction ("Australasian Medical Gazette," 1910, page 417, No. 28), lived with her consumptive husband, and recently, I learned has had cough, expectoration and hæmoptysis, and so presumably has contracted tuberculosis.

I have not heard that any other patient whom I treated without reaction has since developed definite tuberculosis. I have seen many of them from time to time, and know that they are well at present, or were well a short time ago.

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HEREDITY.

New Psychological Theory.

By John Scouller,
Sydney.

(Continued from p. 101.)

Mendel's Principles of Heredity.

The interesting discoveries upon which Mendel's law of heredity is based are certainly the most important ever made in the field of biology, for they serve to cast an entirely new light on the phenome-

na of generation and heredity, which phenomena have been heretofore veiled in the deepest obscurity.

The discoveries referred to were the outcome of certain experiments carried out by an Austrian monk, Gregor Mendel, in the monastery garden at Brunn, in connexion with the hybridization of the edible pea, *Pisum sativum*. These experiments resulted in the natural law now associated with the name of Mendel. This law is regarded by some as being of the very highest importance, quite equal, in fact, to Newton's law of gravitation, or Dalton's theory of atoms. Others, however, regard it as having little, if any, bearing on the important problems of heredity and evolution. Of the former, Professor Bateson may be regarded as the leading representative, while the latter view is adopted by Weismann, for the reason, doubtless, that it has the effect of completely nullifying his own particular theory of the germ-plasm.

The method adopted by Mendel was that of crossing two plants of the same species but possessing different characteristics, the effects of such crossing being carefully noted through several generations.

In his work on "Heredity, Variation, and Evolution," Lock gives an illustration of the working of Mendel's law by citing the results obtained from the crossing of white and yellow maize. It appears that the grains produced by this cross are exclusively yellow, the white character seeming to have disappeared entirely. But when these yellow grains were sown, and the resulting plants pollinated by a pure white strain the grains produced in this way were found to be one half white and the other half yellow. When these white grains were sown and the resulting plant allowed to pollenate each other, cobs were produced bearing exclusively white grains having no trace of the yellow character borne by one of the parents. Moreover, experiments have shown that these white grains continue to breed true, and hence it is manifest that one half of the grains derived from the parentage (yellow × white) × white are pure white, and not be distinguished in any way from the parentage white × white.

Now the results obtained from these experiments are certainly very remarkable, for as Mr. Lock says, they show that the grains produced from the first cross must have had each one white parent.

When the 50 per cent. of yellow grains were sown, and the resulting plants pollinated by a pure white strain, the same result exactly as that obtained in the preceding generation was repeated, one half of the grains produced being white and the other half yellow. Thus it is obvious that the yellow grains produced by the second cross were of precisely the same nature as the yellow offspring of the first cross, the result obtained after pollination by the same white strain being identical.

Now, as Lock observes, this experiment brings us at once to the heart of Mendel's great discovery. And the significance of the results thus obtained is obvious, for they provide demonstrative evidence of the fact, not hitherto suspected, that the reproductive cells (ovum and pollen nuclei) of the crossbred

parents (yellow \times white) bear the character of one or other of the "gametes" of the original cross—the pure white or the pure yellow—without admixture. Moreover the two kinds (white and yellow) of male and female germs must be produced in approximately equal numbers.

We have followed Lock in his exposition of the principles lying at the root of Mendel's discoveries. But it seems to me that he has failed to grasp the true significance of the facts thus revealed. For to my mind such facts clearly prove that the gametes which united in the formation of the crossbred plants are individual entities, possessing a nature similar to that ascribed to the Liebnitzian monads. In other words, they must represent psychical entities possessing certain distinctive characters, which characters, we hold, must have been acquired during previous lives. And it is these characters which, in our opinion, determine the form and other physical characters of the organism to which they give rise.

But in my opinion the most importance inference from the facts thus disclosed is that the gametes do not lose their personal identity in the organism which is built up by and from them. For such facts clearly indicate that each gamete continues to exist and to function both as individual entities and also in combination within the organism. Wherefore they may be regarded as bi-unitary "ruling monads" of the cell community to which they give rise. This idea is based on the fact that each gamete gives rise to new reproductive cells after its own likeness, and bearing its own characters. This, I contend, is the truth which lies at the base of "gametic segregation."

Now the importance of the facts thus disclosed cannot be over-estimated. For when we adopt the principle of the unity of nature and the consequent uniformity and universality of nature's laws, we must conclude that the very same law which governs bi-parental generation and heredity in the lowest organisms must govern the phenomena of bi-parental generation and heredity in the case of the highest, although this law will necessarily be more complicated in the case of more complex organisms. This is a principle which is clearly involved in the monistic doctrines of modern science.

Now I hold that the principles lying at the base of Mendel's discoveries clearly prove that there can be no such thing as either generation or heredity in the ordinary acceptation of those terms—no transmission of physical characters from parents to children, no germ-plasm or heredity substance, no primary constituents or determinants such as those postulated by Weismann in his germ-plasm theory. On the contrary, I hold them to show clearly that the new organism which arises from a combination of gametes is simply the outward physical manifestation of two separate individual entities quite distinct from the parents, such entities having the power of attracting to themselves hosts of other psychical entities by means of which the organism is built up. Generation therefore, according to my view, can only be the bringing into visibility of noumenal entities which must have had a previous

existence, while the phenomena of heredity can be nothing but the manifestation or reproduction of previously acquired characters, modified by the psychical influences of the ruling monads of the parental organisms.

Now, if my interpretation of the facts lying at the base of Mendel's discoveries be correct—and I am convinced that this cannot be assailed on rational or scientific grounds—then it is manifest that the "substance of heredity"—which Darwin, Weismann, Galton and others conceived as being something of a material and "particulate" character—must be something which is of a purely psychical nature. And it is my contention that this something can only be understood when it is regarded as being constituted of the accumulated experiences of former lives combined within a psychic personality.

From what has been thus advanced by me I think the intelligent reader must be convinced of the high importance of the principles underlying the discoveries of Gregor Mendel. For I hold that these principles clearly show that the old idea of metempsychosis is not devoid of a scientific and philosophical basis. And thus we have the suggestion of an infinitude of psychical monads slowly advancing up the ladder of psychical evolution as the result of experience gained during repeated periods of physical embodiment. Indeed I look upon the story of Jacob's dream at Beth-el, wherein he saw a ladder reaching from heaven to earth, whereon the angels of God were ascending and descending, as being simply an allegory designed to teach this very truth to the initiated, while at the same time it concealed the truth from the outsider. This would account for the remarkable fact that the Jews have no doctrine as regards the immortality of the soul. And when the great mystery of existence comes to be regarded in this light, then our ideas as to the nature of this old earth of ours will undergo a complete change, and we shall be constrained, with the Patriarch, to say, "Surely the Lord was in this place, and I knew it not. This is the house of God, and this is the gate of heaven."

Bateson, in his interpretation of the principles underlying Mendel's discoveries, adopts the idea of the organism as being composed of "unit characters" which he believes can be independently inherited. These unit characters Bateson terms "allelomorphs," because he is of opinion that they can displace or be displaced by alternative characters. Lock adopts the same view, and regards this as being one of the most important conceptions which has ever been introduced into the science of biology. For, he says, it is a conception which has changed our ideas on the subject of heredity, since we no longer look upon the individual as a unit, but are compelled to study separately the independent character of which the individual is built up, his view being that "the individual as a mosaic has returned to us." And in this connexion he considers that it would be an interesting problem to consider what would be left if we could imagine all the separate characters of living beings as having been taken away (op. cit., p. 203).

Now this conception of the organism as being an aggregation of independent characters without any substratum, if it could be established, would be fatal to my interpretation of the facts upon which the Mendelian principles are based. But it may safely be affirmed that the idea of separate unit-characters has no sufficient foundation in the facts. For it is quite impossible to conceive of such unit-characters apart from an individual psychic entity of which they are the properties, or in which they inhere. Wherefore I have no hesitation whatever in saying that there can be no such unit characters in the sense of Weismann's determinants, or primary constituents. On the contrary, I hold that the reproductive cells or gametes which are combined in the zygote from which a new organism is evolved, are distinct noumenal entities, or psychological monads, and these can only be understood as complexes of various characters which have been acquired during cycle upon cycle of physical existence, while the organism is manifestly the outward expression of such characters. And we can readily understand how "dominant" characters will naturally assert themselves, and thus have the effect of causing "recessive" characters to be obscured in accordance with the Mendelian principles. And indeed Bateson admits that a compound character borne by one gamete may be transmitted entire as a single character. This, I consider, is the rule without any exception. For nature is uniform and consistent in her working, and consequently an active principle which is observed to operate in one instance may be accepted as a universal principle governing all instances of a like nature. If it were otherwise it would be quite impossible to formulate any natural law whatever.

Now as regards the conception of the individual as a "living mosaic," or a compound of many separate and distinct characters, this I regard as a self-evident truth, provided it be recognized that a mosaic is a unit composed of many parts, but constituting one single and complete work of art, through which the genius of the artist finds expression. In this sense, and in this sense alone, can the individual be regarded as a living mosaic. Moreover, if it be true that the individual monad or gamete is constituted of the characters acquired during repeated periods of embodied existence then it is manifest that if it were possible for such characters to be taken away the individual himself would disappear. For the individual is the sum of its character, and it can be nothing else—except a thought within the Infinite Divine Mind which has not yet been realized.

Then again, as regards the principle of "gametic segregation," by means of which Mendel sought to account for the observed phenomena, I think that the ideas generally held on this point are based on a misconception. Bateson thinks it is very difficult to understand how or when gametic segregation takes place, but he inclines to the idea that this occurs during the maturation divisions, when the chromosomes are reduced by exactly one-half. This, however, is manifestly a fallacy. For segregation does not take place as regards the gametes from which a crossbred organism is derived, there being

simply two individual entities joined in a species of cellular marriage. But it is the gametes subsequently derived from these individual entities, by means of cell-division, which become segregated when they unite with others similar to themselves, and thus form pure-bred organisms in accordance with the principles of Mendel's law.

From what has thus been advanced by me I think the discerning reader must recognize the far-reaching significance of the principles underlying Mendel's discoveries. For, as I have already remarked, such principles have had the effect of changing our views completely as to the nature of generation and heredity, and have brought these obscure phenomena within the domain of natural science—a thing which is unique in the whole history of human thought. For we can now recognize that the phenomena of generation and heredity have a purely psychical significance, and that physical development is the outward manifestation of a psychical process, and not merely a succession of kaleidoscopic changes determined by the "mechanism of protoplasm" or the chemico-physical forces which are bound up with matter, as modern science teaches.

The Psychical Theory of Heredity.

The possibility of forming a rational theory of heredity depends upon our being able to find a rational answer to the question: "What is the nature and constitution of the reproductive cells from which new organisms arise?" And connected with this is the further question: "How are we to account for the power possessed by such reproductive cells of giving rise to physical organisms bearing the character of the parents from whom they were derived?"

By adopting the principles of a reasoned spiritualism we can regard the reproductive cells—the female ovum and the male sperm-cell—as being the physical manifestation of two separate and distinct noumenal entities, or psychological monads, which must have previously existed as ruling monads of other organisms, and which must have been drawn into the organism from which they were derived as the result of spiritual attraction or spiritual affinity. Moreover, as we have seen, there is evidence to show that such psychical monads do not lose their identity in the organism to which they give rise, but that they continue to exist and to function as ruling monads, both singly and in combination, during the life of the organism. This explains the dual character of the human organism, of which the right and left sides are controlled by the left and right hemispheres of the brain respectively. Nor can it be supposed that they cease to exist with the destruction of the organism, for they continue to exist and to function while such organism undergoes a complete process of renovation within a few years at the utmost. It is manifest, therefore, that their existence does not depend upon the material of which the organism is composed, but that the organism which originates from them is entirely dependent upon them.

This is the only theory by means of which we can explain how the reproductive cells possess the power

of giving rise to a physical organism in the likeness of the parent. For if the psychical monads represented in the germ-cell have become what they are as the result of experience gained in innumerable lives—and this I hold to be the only rational and scientific explanation of the phenomena of organic evolution—then it is manifest that, in order to build up an organism by means of which they can once more function in the physical world, it will be necessary for them to repeat in brief order the various stages of organic evolution by means of which their present physical status has been attained. This is the only rational and scientific explanation of Haeckel's biogenetic law, which tells us that the phenomena of ontogeny presents a brief and rapid recapitulation of the phenomena of phylogeny.

Now this theory as regards the nature and constitution of the reproductive cells is in entire harmony with the principles of a true science. For it is obviously impossible to extract from anything more than was actually contained therein; this being the logical corollary of the scientific maxim *ex nihilo nihil fit*. Wherefor, seeing that a living organism with all its latent powers and faculties is evolved from a fertilized germ-cell, it follows of necessity that such organism must have been present within the germ-cell from the first—if not in a material form then as a noumenal entity or psychical monad.

To this argument, which was advanced by me in "The Law of Evolution," published some ten years ago, Professor J. A. Thompson, in his work on heredity (p. 28) replies that it is not necessary to think of the microscopic germ-cell as being stocked with more than "initiatives," for he tells us: "Embryology shows us that one step conditions the next, and one structure grows out of another." But he does not condescend to tell us how such initiatives have come to be implanted in the germ-cell, or who or what acted the part of initiator.

Now I hold that this idea of initiatives cannot possibly be maintained, for I claim that the whole "idea" of the organism must have been latent and implicit within the germ-cell from the outset—the organism being the outworking of such idea—otherwise it would be quite impossible that such an organism could be evolved therefrom. And, indeed, this is clearly implied in the contention of Thompson himself that "the organism and its inheritance are, to begin with, one and the same" (op. cit., p. 6); or, as he says elsewhere (p. 27), the fertilized egg is both "the inheritance and the potential inheritor." He likewise informs us that each of the egg-cells is generally assumed to have in it the potentiality of an organism endowed with a full equipment of all the essential characters of the species. Thus it will be seen that Thompson has been compelled to endow the sex-cells with more than mere initiatives—in fact, he credits them with being at once the full inheritance and the potential inheritor, a conception which approximates very closely to that advanced by me.

The conclusion at which I have thus arrived and to which Thompson has been driven has manifestly its basis in the necessary laws of thought,

and it shows the truth as well as the error which lies at the root of the old theory of "preformation." Moreover, it shows that the theory of "representative particles" and of a continuous germ-plasm, advanced by Weismann, Galton and others, only stops short of a true explanation of the theory of heredity by reason of the materialistic explanations which they offer of phenomena which are of a psychical nature. For the fully formed germs of Bonnet's theory were shown to have no existence whatever, and I have shown that the materialistic bearers of heredity, which modern science has found it necessary to postulate in order to explain the phenomena of heredity, are equally devoid of a real existence. Thus we are shut down to the only other alternative—that the organism as a noumenal or ideal entity must have been present within the germ-cell from the first, and that the psychical entities represented by the reproductive cells, with the help of innumerable other psychical monads which are drawn into the organism through the force of spiritual attraction or spiritual affinity, combine in the production of such noumenal or psychical entity in a form which appeals to our organs of sense. This, I hold, is the only legitimate conclusion which can be drawn from the premises, and it accounts for the fact that the reproductive cells act like intelligent beings which, it has been said, "know where to go and what to do, go there and do it."

Now let us enquire briefly as to the nature of organic bodies—are they merely machines for the transformation of energy, as modern science teaches, or are they veritable kingdoms or republics composed of vast numbers of noumenal entities or psychical monads, governed and controlled by a central bi-unitary ruling monad? And if the latter conception of the nature and constitution of organisms be correct, then it is necessary to enquire as to the nature of the somatic cells by means of which the organism is built up. Are these latter identical physiological units, like a collection of bricks, or are they independent living beings possessing different constitutions and exercising different functions in the building up of the organism, as well as in its subsequent economy and preservation?

We have already seen that it is a necessary inference from the facts that the reproductive cells represent monadic germs of previously existing organisms similar to those of the parents from which they were derived. And if such be the case, then we may reasonably conclude that the somatic cells must represent monadic germs of the lower animals, and these must also be conceived as having previously existed. This is necessary to account for the knowledge and skill which they evidently possess, fitting them to fulfil their appointed work in the building up and preservation of the organism. And, besides, I do not see how otherwise they are to be accounted for.

Now, this conception may appear new and strange to most readers, but it will be found in perfect accord with strict scientific and philosophical principles. For man is certainly the highest product of the organic world, and as such he must necessarily

represent the seed of the great tree of organic existences. Wherefore, as the seed contains every principle of the parent-tree from which it was derived, so man must be constituted of every principle contained in the organic world. Thus it will be seen that we have full justification for claiming that the somatic cells must represent monadic germs of previously existing organisms lower than those of the parents.

Now this theory as to the nature and constitution of the somatic cells is one of considerable importance. For, if I am correct—and of this I am fully assured—then it shows that cancerous growths must be the result of one or more of the somatic cells ceasing to act in their legitimate capacity for the benefit of the organic cell-community as a whole, and beginning to act on its or their own account as a reproductive cell or cells. This will have the effect of introducing a monstrous growth into the economy of the organism, which in time cannot fail to interfere with the normal life-processes and eventually destroy the organism unless it is effectually removed by a surgical operation. This will account for the fact that cancer may be hereditary, although it is not infectious. For the psychical defect which led to this disease in the case of one of the parents may be transmitted to the children.

That this is no far-fetched explanation of the nature and cause of cancer is evident from the fact that cells which develop into cancerous growths have been observed to behave in some respects like germ-cells, more particularly in their mode of division. It is claimed by Hertwig that this indicates that every cell is a potential germ-cell, though it may not contain the full potency of the reproductive cells proper.

This I consider the true explanation as regards the nature and cause of cancer, which medical science, aided by liberal endowments, has been vainly seeking after for many years past, and it fully explains how it is that no effectual remedy has been found for this fell disease, except the surgeon's knife. It also explains why cancer is entirely a disease of mature life, and also why no microbe or bacillus of cancer has ever been discovered.

Such is a brief outline of the theory which has been wrought out by me in "Heredity: The Problem and its Solution," and which I hope to publish in the near future. This theory affords a rational explanation of all the varied phenomena of heredity and evolution, although Professor Bateson has told us that the time for the development of theory is not yet. But all impartial readers can be left to judge whether this theory does not afford a sufficient explanation of all the facts. A theory which can explain why it is that a duckling takes to the water and finds itself quite at home thereon immediately it has issued from the shell need not fear any problem which the phenomena of heredity can present.

Reviews.

THE HISTORY OF SMALL-POX IN AUSTRALIA.

There is more than a mere academic interest attaching to the tracing of the sources of a dangerous pestilence in a great continent. The fascination of speculation is overshadowed by the immediate epidemiological importance of an investigation of this kind. It is therefore a matter of peculiar significance that Dr. Cumpston has collated all the available evidence in regard to the various outbreaks of variola in Australia, and analysed the ascertained factors in a book of close on 200 pages.¹ This subject has attracted the attention of hygienists and medical men for many years. Mullins, Tidswell, Cleland, Ashburton Thompson and others have dealt with the subject at varying length, and their contributions are quoted fully. The volume is enclosed in a horrible yellow cover, suitable enough for the subject matter, but the contents are of absorbing interest, keenly compiled and critically dissected. The work is well arranged, full details are given in regard to the observations of competent and at times the apparently incompetent observers, and the objective is never lost sight of.

The first 12 chapters contain historical data. To begin with, Dr. Cumpston relates what is known and what has been surmised in regard to the prevalence of variola among the aborigines shortly after the arrival of the first fleet in Australia. The author is wise in leaving the question of the nature of what has been termed native pox, and indeed all the diseases supposed to have been small-pox, undecided; the evidence is given, and the solution remains doubtful. After a brief reference to an outbreak among the Europeans in Australia in 1830, the records of which have, to a great extent, been compiled many years later, he passes on to a series of chapters dealing with the records of the disease in each State. The surprising feature of some of these records is that so much uncertainty exists in regard to essential details in connexion with some of the more recent epidemics. We learn that there is no evidence of the origin of the disease in the first case of the outbreak in Sydney in 1881-2. The information in regard to the outbreaks is derived largely from official or departmental sources. The medical journals of the eighties collected information of this nature almost exclusively from officials, and, as a result, the information is often restricted to the point of view of the medical officer responsible for the health of the locality. The result of this one-sided illumination of individual cases and of whole epidemics is the restricted amount of details on which deductions might be based. As a supplement to the account of the occurrence of small-pox in each State, and the measures adopted to check its spread, an analysis of the effect of vaccination on the persons affected and on the community as a whole is attempted. Here again, the value of the evidence is reduced by the fact that the data are insufficient, and in some cases surprisingly so, in view of the fact that there are many practitioners at present in Australia who must have made observations on the matters in question. Space forbids a detailed discussion of the interesting accounts given by Dr. Cumpston of the various epidemics in the various States from 1850 to 1908.

The summary of the conditions obtaining in regard to each ship arriving in Australian waters and harbouring persons who were suffering from small-pox or who were sickening for the disease is important, even if the reading is a little tedious. This chapter further contains some particulars connected with the quarantine regulations and the adequacy or otherwise of the same. Leading from this chapter and from its successor in which the ascertained spread of the disease from ships is discussed, are the most weighty chapters of all, on the epidemiology of small-pox on board vessels bound for Australia, and on the epidemiology of small-pox in Australia. Dr. Cumpston wastes some energy in discussing a theory so devoid of all scientific foundation that we are not aware of any authority other

¹ The History of Small-Pox in Australia, 1788-1908. Compiled by J. H. L. Cumpston, M.D., D.P.H., Director of Quarantine for the Commonwealth of Australia, 1914. Melbourne: Albert J. Mullett, Government Printer; Royal 8vo., pp. 182. (Issued under the authority of the Hon. the Minister for Trade and Customs).

than McCombie of the Metropolitan Asylums Board, who has given this matter serious consideration within recent years. We refer to the aerial convection of the infection. Dr. Cumpston introduces his reference to this mode of spread by stating that it has received complete endorsement from the Local Government Board of England, which he regards as an authoritative body. The Local Government Board undoubtedly employs many capable permanent officials, but surely it is undeserved flattery to regard the Board as an undoubted authority. Another point which should be referred to is the extraordinary large number of deaths attributed to varicella. Dr. Cumpston points out that it is a matter of common knowledge that chicken-pox is very rarely fatal, and suggests that many of the alleged cases may have been syphilis, impetigo, or even variola, though he assumes that the lastnamed supposition is unlikely.

The interest and value of the book is enhanced by the reproduction of a series of articles by other observers on the subject. Regarded as a whole, the work contains material for a reply to the questions: why has small-pox invaded Australia from time to time, but never become endemic? and which are the factors which lie within the reach of the authority for dealing with a threatened lasting invasion by the unknown virus? The reply is given with reservation and caution, but it is given. Within certain limits we agree with the reply, but venture to differ in one respect, namely, "that the disease has spread slowly and to a short distance, because the population has not been sufficiently crowded to permit of large numbers of susceptible people coming into actual personal contact with the patient." Overcrowding without doubt is a potent factor in the spread of any infective disease, but not solely on the score of contact. Individual susceptibility varies; some unvaccinated persons are almost immune to the disease. There is always a possibility that a certain degree of protection is afforded to the descendants of a vaccinated community; and if these descendants are placed under the undoubtedly healthy conditions of vast, sparsely-populated Australia, it is to be expected that the individual susceptibility would be lower than that of the peoples of Great Britain or Ireland during the nineteenth century. We recommend all hygienists to seek the reply to the two questions in the book itself.

GASTRIC SURGERY.

The title of Professor Rovsing's book "Abdominal Surgery" (1) is misleading, for the greater part of the book is devoted to a description of the author's views on gastric surgery. The subject is presented in the form of a series of clinical lectures, which lose none of their lucidity and individuality in Dr. Pilcher's translation.

The preliminary lectures are devoted to a consideration of antiseptic methods and of anaesthesia. "Primary and total ether narcotization" is strongly recommended, for "he who is so fortunate as to have learned the morphine-ether narcosis with the help of Wanscher's mask, will never have any occasion for lumbar anaesthesia and very rarely for local anaesthesia."

Foreign bodies in the alimentary canal, and stricture and dilatation of the oesophagus are discussed in the next three lectures, after which Professor Rovsing describes various methods of diagnosis of diseases of the stomach. He has devised a gastroscope very similar in construction to a cystoscope, which is introduced into the stomach through a small opening made in its wall during an operation. The stomach is then distended with air injected through the gastroscope, and in this way its mucous membrane can be readily examined. Roentgen examination of the stomach is rather briefly described, but more space than is necessary is devoted to such obsolete methods of investigation as scraping auscultation and distension of the stomach with air. The author then discusses his favourite topic of gastroptosis at considerable length.

He describes various clinical examples of two types of gastroptosis "virginal" and "maternal." He strongly recommends gastroptosis as a method of treatment, and, in addition,

in some cases, he advocates the fixation of the liver to the peritoneal covering of the diaphragm. Where the left lobe of the liver is elongated, and thereby hinders the replacement of the stomach, it becomes necessary to remove the lobe by resection!

Dr. Rovsing has obviously no conception of the part played by the muscles of the abdominal wall in maintaining the position of the abdominal viscera. He has even devised a method to enlarge the abdominal wall in the epigastric region to allow of more room for the replacing of the stomach, an operation which must in itself interfere greatly with this function by weakening the muscle. He further recommends gastroptosis in preference to ileo-sigmoidostomy for the cure of certain cases of chronic constipation. Both these operations may be useful, but it is to be hoped that surgeons will await further evidence before performing them in the indiscriminate manner advocated by their originators.

In describing chronic ulcer of the stomach, Rovsing maintains that hour-glass stomach is caused, not by the contraction of an ulcer, but by gastroptosis. Much clinical and pathological evidence can be brought forward to disprove this contention.

The following quotation from a lecture on echinococcus of the liver is of interest: The cyst wall "was enormous. . . and it was evident that the walls would never collapse and heal through simple drainage. . . . I therefore decided to cut the Gordian knot by resecting the liver!"

Readers of this work will doubtless agree with the author's statement in the preface that "The book presents, in many respects, observations which have not yet been brought out in other countries, and also methods of examination and treatment which are original, and which, perhaps, my foreign colleagues will not accept without question."

Notes on Books.

Dr. G. Lane Mullins has supplied the profession with a condensed summary of the subject of medical electricity, in a handy little book of small dimensions.¹ He describes the books as an elementary text-book, and addressed himself to nurses and students. His account of the various phases of the subject is excellent, but the contents of the volume does not justify the stately designation of text-book. We can recommend students and nurses to use the book as a stepping-stone to the study of medical electricity. It is, in our opinion, a deplorable habit to acquire superficial knowledge for practical purposes, and for this reason, everyone who employs electricity for any purpose whatever should devote sufficient time to its technical study to enable them to gain a thorough insight into the theoretical and practical aspects. Dr. Mullins's book will find a ready sale, since it is written by a man who has a good grasp of his subject.

Messrs. E. & S. Livingstone, of Edinburgh, have issued a series of small books written in the form of questions and answers on various scientific subjects.² The second volume of the Medicine catechism and the first part of the Botany catechism have reached their second editions. The second part of the Surgery catechism is also available. We fail to recognize the need for this form of cramming publication. Some of the information contained is reliable, but not all. The fact that the volumes are small enough to slip readily into the pocket might suggest their surreptitious employment at examinations.

Dengue is reported to be epidemic in Darwin and parts of the Northern Territory. Dr. Mervyn G. Holmes, the Chief Health Officer of the Northern Territory, is stated to be affected with the disease.

¹ Medical Electricity: An Elementary Text-Book, by George Lane Mullins, M.A., M.D., 1915. Sydney: Angus & Robertson, Ltd.; Half-Royal, 4vo., pp. 55; Illustrated.

CATECHISM SERIES.

Medicine, Part II, Second Edition, 1914. Edinburgh: E. & S. Livingstone; Cr. 8vo., pp. 180. Price, 1s.

Operative Surgery, Part II, First edition, 1914. Edinburgh: E. & S. Livingstone; Cr. 8vo., pp. 144, with Plates. Price, 1s.

Botany, Part I, Second Edition, 1914. Edinburgh: E. & S. Livingstone; Cr. 8vo., pp. 80; Illustrated. Price, 1s.

(1) "Rovsing's Abdominal Surgery." Clinical Lectures for Students and Practitioners, Edited by Paul Monroe Pilcher, M.D., 1914, Philadelphia and London, J. B. Lippincott; Sydney, Angus and Robertson, pp. 477, price, 24/-.

Medical Journal of Australia.

SATURDAY, FEBRUARY 6, 1915.

The Clearing Station.

At a distance of eleven or twelve thousand miles it is difficult to form any adequate conception of the state of affairs in the fighting lines in Europe. No matter how carefully the accounts published in the daily press are followed, even those who have had experience of past campaigns are incapable of forming a picture of the conditions obtaining with the field ambulances and in the clearing stations. Last week we published a highly interesting and ingenious communication on the treatment of abdominal wounds in modern warfare by Dr. Hadley. In the discussion which followed, it was pointed out by Dr. Trethowan that, while the proposals made by the author were theoretically sound, it would be impossible to put them into practice with justice to the wounded waiting their turn for treatment. The suggestion made was that all wounds of the abdomen should be opened as soon as the patient was brought in, that the surgical interference should be limited to simple drainage, and that the patient should be passed through the clearing station to the base in the Fowler position.

Dr. Hadley was drawing on his experience of the Boer War, and his proposals would, without doubt, have been of immense life-saving value in that campaign. But the conditions obtaining at present in the Belgian and French battlefields appear to be such as would exclude success if an attempt were made to carry the procedure into practice. Sir Watson Cheyne's recent utterances have received a peculiarly powerful support from Sir Anthony A. Bowlby, in a letter published in the *Lancet* of December 19, 1914. Speaking of the "Battle of Ypres," he tells of the marked differences between the present conditions and those of South Africa. In the first place, the modern bullet produces a large, ghastly wound of entrance, and a large wound of exit. The bullet tears, mauls and splinters every tissue lining the channel of passage. In the next place, the range is either close quarters, or, at most, from one to two hundred yards, while in South

Africa it was usually from 800 to 1500 yards. Again, the effect of howitzer and shrapnel shell is a class of wound which is bound to slough, and in which muscles, portions of bone and large pieces of viscera are rudely torn away from their bed. Added to this, the wounded lie for periods varying from a few hours to the more usual $1\frac{1}{2}$ or even 2 days in the wet mud of heavily manured fields. It is physically impossible to get the wounds even moderately clean, let alone aseptic.

With conditions such as these, drainage might be the best form of treatment during the first period, but Sir Anthony Bowlby points out that in the clearing stations, the limited accommodation and the enormous number of wounded to be dealt with each day renders it imperative that the time at the disposal of the surgeon shall be divided as equally and fairly as possible. In one clearing station we learn that on three consecutive days more than one thousand wounded men were treated. The maximum number mentioned as having been seen to in one day at the clearing stations was three thousand. In another passage he speaks of the daily treatment of a hundred or more compound fractures, besides "caring for five or six hundred other men shot through the chest, the abdomen, the head, etc., and many of whom require immediate attention." Dr. Hadley will be the first to realize that any systematic opening of the abdomen and insertion of drainage tubes under these conditions is quite out of the question.

If these reasons were not sufficient, Sir Anthony Bowlby supplies others, still more potent. It must be remembered that no man is kept over the one day in the clearing station. Owing to the nature of the engagements, the preparation of the "stations" or hospitals is far from satisfactory, or we should say, ideal. Beds are wanting for the most part; the floors are covered with mud; no tents can be fixed up, and everything may have to be shifted at short notice. That the results are as good as they are is, in itself, evidence of the excellent organization and high skill and endurance of the surgeons with the forces. But surely these are not the conditions under which a surgeon would willingly open an abdomen unless compelled to do so. Even if he had time! In the last place, Sir Anthony

Bowlby preaches a doctrine which surgeons will not forget for many a century. Lord Lister lived to a ripe old age, honoured by all who were capable of judging his wonderful work. A few irresponsible gibbers under the guise of anti-vivisection have attempted to belittle his work with the quibble that Lister's antiseptics was a "dead dog," and that it had given way to asepsis. Sir Anthony states that asepsis is useless on the field, and that true Listerism is indispensable. Antiseptics has saved the situation in Europe to-day, by saving a large percentage of the wounded. No real pyæmia has occurred, in spite of the most adverse conditions, and no true cases of hospital gangrene. These results are due to the return to the antiseptic, so long discarded under the ideal conditions of a modern operating theatre, but now found to be irreplaceable in the makeshifts called hospitals in the fighting line.

THE PREVENTION AND CURE OF CONSUMPTION.

The annual meeting of the National Association for the Prevention and Cure of Consumption (New South Wales) was held in the Town Hall, Sydney, on January 27, 1915, Sir Philip Sydney Jones (the President) occupying the chair.

The annual report, which is the second of this branch of the mother Association, was read by Dr. Zlotkowski. The honorary medical staff had been increased during the year by the appointment of Drs. Macpherson and Humphries.

Several of the medical officers were at present on military duties, and Dr. Creswell Howle had quite recently been appointed to one of the vacancies. The chief part of the report deals with the work of the dispensary. It appears that on April 30, 1914, the Minister of Public Health was approached by deputation with the view of obtaining his sympathy and support, and of impressing on him the importance of extending financial aid to the dispensary. A more suitable building was required, and it was desirable to institute a fund for the support of the dependents of patients undergoing treatment. Mr. Flowers promised to give these requests his favourable consideration. The Association has a scheme on foot at present for the institution of a second dispensary in Balmain, Alexandria, or some other populous district of Sydney. During the year, 604 new patients had been received at the dispensary in Hay Street, and, in all, 11,671 attendances had been given. On December 31, 1914, 226 patients were under treatment with tuberculin. One hundred and ten persons had been sent to sanatoria for treatment, while a further 30 were being looked after in country homes. The nurse visited 326 patients in their own homes. Twenty-two deaths had taken place among those under treatment.

The National Association is working on a scheme modified from the Edinburgh scheme, devised by Sir Robert Philip. The central pivot of the Sydney scheme is the dispensary, while from this the sanatorium, the hospital for advanced cases, the open-air schools and the farm colonies radiate. In regard to the machinery for the control of the patients, compulsory notification is insisted upon. The dispensary is modelled on the lines recommended by Dr. Camac Wilkinson, and is essentially a tuberculin dispensary. In the present issue, a communication read by Dr. Guy Griffith before the New South Wales Branch of the British Medical Association on the reliability of tuberculin in the diagnosis of tuberculosis is published. Dr. Griffith is a member of the Committee of the Association, and is very active in this part of the work. We hope to be in a position within a short time to analyse the results obtained up to the present by the Association in the dispensary and in the sister institutions. For the present, no criticism should be expressed on the work of this excellent organization. The object aimed at is the reduction of infection and the improvement of the condition of the infected. This public-spirited and important work must have the hearty support and co-operation of all interested in the public weal.

THE SHORTAGE OF MEDICAL OFFICERS IN HOSPITALS.

A short time ago, the Melbourne Hospital was faced with a serious difficulty in view of the large exodus of the medical staff to the front. The resident staff, as well as the honorary staff, was thinning perceptibly. In Perth, the same story, at all events as regard the resident staff, is told. At the Perth Public Hospital, two out of five junior resident medical officers have joined the Expeditionary Forces, while a third has resigned, so that the hospital, with its 286 beds, is being tended by two junior "residents." Two of the honorary medical officers have also gone to the front. The condition of the hospital does not admit of this understaffing. All the available beds are occupied, both at Perth and at Subiaco. Many of the cases are acute. A number of enteric fever patients are under treatment, and the other work is of a strenuous description. It has been stated that the chances of securing the services of young practitioners until the next final examinations take place at Adelaide, Melbourne and Sydney are small. Medical students and medical practitioners appear to be in some doubt as to what course they should pursue. In another column we publish a letter giving advice to senior students from the President of the General Medical Council of Great Britain. This advice is to finish their studies, and not to volunteer as combatants, since their services as medical officers with the army may be required later on. At present, there is no demand for fresh volunteers for the contingents which may be sent from Australia. On the other hand, students and practitioners who are at present working within the Commonwealth have a duty to perform for their country at home. The sick are in need of skilled attendance now as in less trou-

lous times. It is not in the interests of the sick that men should attempt to attend more than a reasonable number. It is therefore greatly to be desired that students will push on with their studies, so as to be in a position to offer their services to the various public hospitals as soon as they have become enabled to register their names on the rôle of practitioners.

GARBAGE DESTRUCTORS.

The Sydney City Council have apparently been persuaded to swallow the garbage destructor pill, and have laid aside the punting to sea idea for the present. On January 27, 1915, the City Surveyor, through the Mayor, gave some interesting information in regard to the destructors. It appears that the first cell of the Moore Park destructor cost £11,372, inclusive of roadway and buildings. This cell proved to be inefficient. A second cell was erected at a cost of £7,100, and subsequently a further £3854 were expended on the destructor for the purpose of increasing its working capacity.

The cost of working the destructor was stated to be approximately 9s. 6d. per ton. Of this sum, 2s. 6d. was required for burning, 4d. for the removal of clinker, and 6s. 8d. for collection and cartage.

The Council resolved that it was highly desirable that suitable and convenient sites should be selected forthwith, for the erection of such garbage and refuse destructors as the Council might consider necessary, and, further, that the Council as a whole should visit the sites offered and make its own selection. We are at a loss to understand why the members of the Council should be so very anxious to perform work which a skilled and trained person will have some difficulty in carrying out satisfactorily. The Sydney City Council should learn a lesson from other bodies. Ratepayers have insisted on the dropping of the punting-to-sea scheme, and the Mayor showed much good sense in listening to public opinion. We are not in a position to surmise whether any of the councillors or aldermen have suffered personal loss by this decision. We trust not. If the members of the Council insist now in exercising more than a controlling power on the selection of suitable sites for the erection of destructors, the public will be inclined, rightly or wrongly we do not know, to attribute this desire to meddle in the work of the expert to a wish to make profit out of a public work. As men of the world they should give the possibility of a suspicion of this character a very wide berth.

AN ETHNOLOGICAL MUSEUM.

In the Annual Report for 1913-14 of the Board of Governors of the Public Library, Museum and Art Gallery of South Australia, among the many interesting chapters, is one written by Professor E. C. Stirling, F.R.S., C.M.G., the honorary Curator of the Ethnological Museum. During the year there have been several extremely valuable accessions to the Museum. A collection from the MacDonald Range district comprises a large number of decorated articles used in totemic and other sacred ceremonies of the Arunta and Luritja tribes. These objects are extremely fragile and are used only on rare occasions. They do not frequently find

their way into museums. Another collection includes numerous sacred objects known as churinga, and various other articles and weapons used by the MacDonald Range tribes.

A Western Australian collection includes some well carved specimens belonging to the churinga class and some rare types of spears. Other acquisitions embrace a collection from Melville and Bathurst Islands, Northern Territory. It is interesting to note that the workmanship of the natives from these islands shows some deterioration in quality.

During the year under review, progress in the arrangement and labelling of the specimens in the various collections has been achieved. It is hoped that the Strehlow and Liebler collections will soon be in good order. The ceremonial objects in these collections will form an especially interesting exhibit. In view of the limited knowledge of the majority of men on the customs and habits of the native races of Australia and the South Seas, advantage should be taken of residence in, or a visit to, Adelaide to visit this Museum and to study the exhibits which Professor Stirling has placed together with so much care and skill.

VARIOLA ON THE "RUNIC."

No fresh cases of small-pox have been reported among the passengers or officers and crew of the "Runic," now in quarantine in Melbourne. In all four cases have occurred; a fifth case was suspected in Perth, but it appears that the illness was not of this nature.

We understand that Dr. Armstrong of the New South Wales Board of Health was sent to Melbourne last week to study the cases and to investigate the conditions of quarantine. The actual objects of this visit is not clear, but in view of the smouldering epidemic in New South Wales, no doubt it was thought that some lessons might be learned from these freshly arrived patients. In any case, Dr. Armstrong was informed that no one could be admitted into the quarantine station who was not prepared to remain there until all the contacts and patients had been discharged. The Minister supported this decision. Dr. Armstrong was therefore compelled to go empty away. This little incident should be regarded as another reason in favour of placing the whole of the public health control under a Federal Ministry of Public Health, with a medical practitioner of the widest hygienic experience as Minister and commissions in each State, as well as Federal permanent officials of experience, to undertake the administration of health measures.

Dr. Westhäffer, a medical officer attached to the United States' Biological Station in Pago-Pago, or Tutuila, an island in the Samoan group, at which the American ships call on their westward passage only, arrived in Sydney on January 11, 1915. He is reported to have made some statements on the prevalence of elephantiasis and frambesia or yaws in the island. He is of opinion that the former is spread by the *Stegomyia fisciata*. The American Navai men in the island are required to take tincture of the chloride of iron, but the value of this remedy is questioned. The effects of the filarial worm would seem to be very severe. In regards to yaws, he stated that the native Tutuilans accept this disease as an inevitable affection of childhood. A practice of infecting children with the disease at an early age was common, since the belief that the attacks in later life is more severe is wide-spread. The work of Castellani in discovering a spirochæte indistinguishable from the sp. pallida of syphilis led to the employment of salvarsan in this disease. Dr. Westhäffer reports good results from this treatment.

The attention of members is called to an advertisement appearing in another part of this issue, in which applications for the positions of resident medical officers in the Victorian Eye and Ear Hospital, Melbourne, are invited. These positions are peculiarly suited to young practitioners who desire to equip themselves thoroughly for either special eye and ear work or for modern general practice. The class of the work in the hospital is of a high order, while the laboratories are well equipped and up to date.

Abstracts from Current Medical Literature.

OPHTHALMOLOGY.

(35) Heterophoria.

Wendell Reber discusses the views held at present in regard to the nature of heterophoria (*The Ophthalmoscope*, October/November, 1914). He believes that for the purpose of diagnosis, the Maddox rod is unsurpassed for simplicity and accuracy. Both infinity and reading tests should be made. For testing the latter with the Maddox rod, the patient should hold a small electric light at the reading distance. Then on removing the rod, the light with the patient fixing it is carried closer to the eyes, until one eye breaks away. This will give the convergence near point. Concerning orthophoria, a liberal view must be taken. Slight vertical deviations are never important, but for the lateral muscles two degrees of deviation may cause no trouble, provided that the patient has euphoria. Esophoria was found 86 times associated with hypermetropia, and 14 times with myopia. If full correction for the hypermetropia, or a little over, be made, and relief does not follow, exercise of the divergency power may be tried. Patients will often not tolerate this exercise. The patient wearing prisms in a frame, edges out, starts gazing at a light a foot distant, and gradually backs away from the light across the room; on the return toward the light the prisms are lifted out to rest the eyes. Another exercise is to fix a point straight ahead in the primary position, then to turn the eyes as far to the right as possible, then back to the first position, then turn as far as possible to the left, and back to the primary position. The use of prisms in the position of rest is still debatable; the author's preference is in favour of weak prisms continuously worn, and he holds the opinion that tenotomy is rarely called for. It is found that exercises are at times better tolerated and more successful after resting prisms have been worn. The average strength is two prism diopters for each eye. For myopic esophoria the author recommends special attention to the axis of the patient's astigmatism, and uses resting prisms, if necessary. In 500 cases of esophoria only one necessitated tenotomy.

Exophoria may be classified as follows:—(i.) Accommodative, with myopia; (ii.) exophoria associated with hypermetropia, with normal divergence and deficient convergence; (iii.) exophoria associated with hypermetropia, with normal convergence and excessive divergence; and (iv.) exophoria with hypermetropia with sub-normal convergence and divergence. In myopic exophoria, the wearing of full correction glasses is usually sufficient. In hypermetropic exophoria it is important to distinguish between convergence insufficiency and divergence excess; the prism convergence and prism divergence, and the con-

vergence near point should be determined. A poor convergence near point (4 or 5 inches) is more significant than a larger exophoria with a good convergence near point (2 or 3 inches). Exophoria is most frequent between the ages of 40 and 50 years. The hypermetropic cases should be under-corrected, and rational living insisted upon. Prism training may be started with 5 degrees prisms in each eye, edges in, mounted in a frame. The patient fixes a light, walks backwards and forwards in a fair-sized room ten times in the morning and 20 times at night. The lateral rotation exercises described for esophoria are also valuable. In 200 cases of exophoria, the results were good in 75%, and though the exophoria was not reduced the symptoms were relieved. Relief is often afforded by wearing prisms, edges out, constantly. In spite of the opposition of many authorities, the author prefers this course to operation. Prisms were ordered in 250 cases, and gave relief in 193. A fourth of the distance deviation should be ordered at first, that is an eight in each eye. There is no real objection to increasing this at a later date, if necessary, even up to 5 prism diopters in each eye. Prism exercises should be combined with the wearing of resting prisms. Some patients have considerable exophoria for reading, but little for distance. They should be advised to go in for convergence training. Out of 500 patients only 22 were subjected to the operation of tenotomy. Hypophoria is more constant in degree than esophoria and exophoria, and is more in evidence between 30 and 50 years. Exercises are useless, whereas rest prisms are specially indicated, often with brilliant results. One-third to one and a half the distance deviation should be ordered at first.

(36) The Treatment of Trichiasis.

After performing over a thousand operations for trichiasis during four years at the British Ophthalmic Hospital in Jerusalem, Harrison Butler has found that the following methods meet all requirements (*The Ophthalmoscope*, November, 1914). The methods are:—van Milligen's, Snellen's, a modified Spencer-Watson's operation and simple excision with lip graft. The simple Jaesche-Arlt operation has been given a full trial, but failures and recurrences have proved far too common. In Waldaner's modification of Jaesche-Arlt's operation, a piece of the skin of the lid is planted into the split edge, but hairs grow on it, and the result is bad. The author is emphatic in the opinion that skin should never be grafted into the lids internal to the lashes. Van Milligen's is the best operation for trichiasis. The lid is everted and split from end to end and into the skin surface at each canthus. The cut is deepened to 7 mm., and all hair follicles removed from the posterior lip. A piece of skin is then removed from the lid and the gap sutured. A graft of correct size is obtained from the lower lip, denuded of sub-mucous tissue, and placed in the gap in the lid. This graft is pressed gently in its place until the blood has

coagulated under it and has luted it down. The eye should be kept covered for four days. Snellen's operation, as modified by Cant, has given excellent results in selected cases. The tarsus must be of good breadth, there must be no conjunctival atrophy, and the operation must not be repeated. A considerable number of cases relapse, and if the tarsus be short, or the operation repeated, lagophthalmos may result. A piece of skin about 3.5 mm. in width is removed from the lid near the lashes. The skin is reflected upwards, the tarsus cleansed, and some fibres of the orbicularis are removed. The tarsus is then incised from end to end, close to the cilia and down to the conjunctiva. A second incision is made 1 to 2 mm. above the first and the tarsus between is removed. The lower segment is then sutured to the upper segment by four sutures. For slight cases this Snellen-Cant's operation is the better. Recurrences may occur, whereas the author has not had one after van Milligen's operation. For trichiasis of the lower lid he always employs Snellen's operation. General anaesthesia is used and ether is insisted upon.

(37) The Tangent Curtain.

Duane describes an apparatus which he has contrived for the measurements of (i.) central and paracentral scotomata and enlargements of the blind spot, (ii.) the field of vision, (iii.) the field of fixation, and (iv.) the field of double vision (*Archives of Ophthalmology*, November, 1914). The curtain is 5ft. by 4ft. 5in., running on a verticle frame 6ft. 6in. high. It is black on one side and white on the other. On the white side are drawn radiating lines from a common centre. Each line forming an angle of 15° with the next. There are also thick perpendicular lines 10in. apart, and thin lines 2in. apart. The black surface, which represents the front of the curtain, is marked only by a white pin, indicating the position of the centre of the chart on the reverse side, and by a series of short red strokes indicating the position of the radiating line. The apparatus may be used at 30in. distance, and at 60in. distance. Corresponding record charts for these two distances are made.

To delimit scotomata the 60in. distance is used. The curtain is adjusted in height so that the centre is exactly opposite the eye to be examined. The other eye is covered. While the patient looks steadily at the central pin, the test object is carried from the periphery to the centre along each meridian in succession. The points where the test object enters and leaves the scotomata in each meridian are indicated by thrusting pins through the curtain. To plot diplopia, the patient is seated 30in. from the curtain. A red glass is placed before the right eye, and a small electric light is carried over the curtain in the six cardinal directions, right, left, up and right, up and left, down and right, down and left; and the point where the diplopia occurs in each meridian is noted by thrusting in a pin. In plot-

ting the observation on the record chart the front or back of the curtain may be used. If the back be used, it must be remembered that the right side corresponds to the left side of the field of vision. For mapping double images in paralysis it excels all other methods known to the author. Its other advantages, accuracy, simplicity, thoroughness, and rapidity.

(38) The Treatment of Trachoma by CO₂ Snow.

Since the introduction of solid carbon dioxide in the treatment of trachoma, Montagu Harston (*The Ophthalmoscope*, November, 1914) states that he is able to fix a definite period during which the cure can be completed. This period is three months for chronic cases and six months for recent cases. The snow pencil is applied horizontally to the everted lids, with firm pressure for 15 seconds at the first application, and for 30 seconds at each subsequent one. The snow is applied every 10 to 14 days. The cornea must not come into contact with the snow or with the frozen conjunctiva. The pain caused is considerably less than that following the application of blue stone. The author has had experience of over 7000 cases, and denies that excessive scarring follows the treatment. The snow effects cure by causing hyperæmia—an example of Bier's method.

LARYNGOLOGY AND OTOTOLOGY.

(39) The Pathology of the Ethmoidal Labyrinth.

Shambaugh (*Journ. Amer. Med. Assoc.*, Dec. 12, 1914) presents for consideration the more frequent pathological conditions involving the ethmoidal labyrinth. Acute catarrhal ethmoiditis is the condition most commonly met with. This condition develops as a frequent sequel to an acute coryza. There is an oedematous-like swelling of the mucous membrane. The patient experiences a characteristic sense of pressure and fullness, and even pain between the eyes. As a rule, there is a profuse discharge of mucus from the nose. An occasional sequel of acute catarrhal ethmoiditis is the occurrence of the closure of an ethmoidal cell, with retention of secretion. This secretion may be spontaneously discharged, or the condition may persist, as a chronic mucocele. Acute empyema of the ethmoidal labyrinth is not so common. When the ethmoid bone becomes involved, the process persists as a chronic empyema, unless the diseased bone is removed. Chronic hypertrophic ethmoiditis is characterized by the symptoms of almost continuous acute cold in the head, attack of sneezing, and sensation of fullness between the eyes. Chronic atrophic ethmoiditis occurs usually in association with a general atrophic process in the nasal chambers.

(40) Affections of the Lingual Tonsil.

Bredevet (*The Laryngoscope*, October, 1914) discusses the affections of the lingual tonsil. Strictly speaking, the so-called lingual tonsil is not a tonsil

at all. It consists of a collection of lymphoid tissue at the base of the tongue. The lingual tonsil forms the lowest portion of the lymphatic ring of the Waldeyer. Affections of the lingual tonsil are easily overlooked. Serious disease of the lingual tonsil, causing soreness of the throat, may not be discovered, unless looked for with the laryngoscope and head light. This specialized group of lymphoid tissue is subject to all the inflammatory and other changes which attack the other tonsils and tissues of the throat. Lingual varix is of frequent occurrence, and often produces an irritative cough. One of the varicose vessels may rupture and cause alarming hæmorrhage. The cough is irritating, and disturbs sleep. The patient becomes run down and loses flesh. The erroneous diagnosis of tuberculosis may be made, unless the laryngoscope is used in the examination. Simple hypertrophy of the lingual tonsil is one of the most frequent affections of this part. It is associated with a dry, unproductive cough, which is increased when the patient lies down or is in close atmosphere, e.g., in a theatre or church. Sometimes the patient complains of a fullness in the throat or the *globus hystericus*. The treatment consists in the application of a glycerole of iodine solution, three or four times at intervals of two days. If one of the vessels is bleeding, it should be closed by searing it with the electric cautery.

(41) Aural Complication of the Exanthemata.

Bordern (*The Laryngoscope*, September, 1914) presents an interesting paper on the subject of aural complications of the exanthemata. In a series of 454 autopsies, he found aural complications present in 82% of the cases of diphtheria, in 94% of the scarlet fever cases, and in 100% of the cases of measles. In this series of fatal cases there were only four cases of meningitis, and one case of infection of the jugular vein. In no instance did autopsy reveal the presence of a cerebral abscess. Complications affecting the lungs, pleura, kidneys, joints and heart were met with on several occasions. He believes that a certain number of these complications were of middle ear origin. During the course of scarlet fever aural complications may arise at any time from the first day of the acute symptoms to the last day of convalescence. Complications arising in diphtheria usually occur late in the disease. In measles, on the other hand, aural infections usually arise early in the disease. As a rule, aural complications occur more frequently in the young. The clinical features are variable. Pain is frequently absent. Some elevation of the temperature is usually, but not invariably, present. Tenderness over the mastoid process is a very unreliable sign. On examination, the drum is of a greyish pink colour. So-called "nipples" may be observed on the tympanic membrane. The persistence of a "nipple" with an excessive discharge is an indication for a mastoid operation. In children,

bulging forward of the auricle is the first indication given of mastoiditis. In the prophylactic treatment of aural complications, removal of adenoid tissue before the patient contracts a contagious disease should be given primary consideration. Where the tympanum is found to be red and inflamed, paracentesis should be promptly performed. He believes that in many cases where paracentesis is advised at the present time better results would follow if the mastoid operation were performed.

(42) Otorrhœa.

Harold Whale (*Practitioner*, Sept., 1914) goes very extensively into the causes and treatment of otorrhœa. His subdivisions are purely clinical, and are not anatomical. The discharge may be (I.) cerebral spinal fluid. It may be (a) pathological; due to (1) tubercle, (2) suppurative otitis, (b) traumatic, due to fractures of the base of the skull, involving the temporal bone, or (c) operative after operations for meningitis where it is desired to maintain drainage. The diagnosis under this subdivision is comparatively easy, the character and constant flow of the discharge being characteristic. In the next place the discharge may be (II.) serum. In this case the following are differentiated: (a) acute bulbous myringitis, (b) subacute serous otitis media; (c) herpes auricularis; (d) eczema. It may also be (III.) blood. The subdivisions given are: (a) accidental trauma, fracture of the base of the skull, (b) operative trauma occasioned by (1) removal of hard masses of wax, (2) operations on middle ear, especially when an abnormally high jugular bulb is present, and (3) curetting the eustachian tube after a mastoid operation. The carotid artery may be cut; (c) acute otitis media (diphtheritic); (d) chronic otitis media with polypus or bleeding granulations, and (e) neoplasms of external or middle ear. Lastly, the discharge may be (IV.) pus. It may be due to (a) furunculosis, (b) acute suppurative otitis media, or (c) chronic suppurative otitis media. In regard to treatment the author emphasizes the important fact that a discharge of cerebro spinal fluid, or copious flow of blood must be arrested, but serum or pus never. Turning to the subject of operations for otorrhœa he gives many useful hints. For acute cases he recommends paracentesis and Schwartze's mastoid operation. For chronic cases he speaks highly of ossiculectomy and also of Stack's radical mastoid operation. The cases likely to require the radical operation are: those of long standing, cases affecting adults, cholesteatomata, and large perforations with continual discharge. Operations may be carried out as a preliminary to intercranial operations. The cases less likely to require radical operation are traumatic cases, case of recent disease, otorrhœa in children, otorrhœa complicated by the presence of adenoids and nasal obstruction, and otorrhœa in the presence of large granulations and polypus. These cases often resolve after the removal of the cause.

British Medical Association News.

MEDICO-POLITICAL.

An extraordinary meeting of the New South Wales Branch was held at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on January 29, 1915, Dr. David Thomas, the President, in the Chair. There were about 120 members present.

An Ethical Matter.

The first business of the meeting was the consideration of a medico-ethical complaint against a member of the Branch. It was resolved that the member be expelled from the Branch on the ground that he accepted and continued to hold a position as Medical Officer of certain Friendly Society Lodges contrary to the declared views of the Branch.

The Australian Natives Association.

Dr. R. H. Todd, the Honorary Secretary of the Branch, moved on behalf of the Council:—

"That a vote of the meeting be taken with a view of enabling the Council to determine whether it is the wish of the Members that, in the event of the Australian Natives Association of New South Wales agreeing to accept the Common Form of Agreement between Medical Officer and Friendly Society Lodge, and so altering its Constitution as to prohibit all participation in current politics or political movements, and to exclude from its membership all persons other than 'benefit members,' the Australian Natives Association of New South Wales shall be recognized as a Friendly Society to which Members will give their services as Medical Officers."

Dr. Todd explained that the A.N.A. had many years ago developed out of an organization of individuals into a very powerful political body in the State of Victoria. The political importance of this body was so great that it was at one time the practice of the Premier to announce the policy of the Government at the annual meeting. Somewhere about the year 1904 (he was not quite sure of the date) the movement spread to New South Wales and the A.N.A. of New South Wales was established for the purpose of pursuing the same line of activity in this State, as it was pursuing in Victoria. That the object was a political one was evident in view of the kind of members who were enticed to join. The Victorian Branch of the Association had issued a warning to the New South Wales Branch to keep clear of this body. The Branch determined that the A.N.A. of New South Wales should not be recognized as a Friendly Society and none of the members accepted positions in connexion with it. The action of the Branch had caused the plan to fail and the character of the A.N.A. had changed entirely. Political persons of importance no longer found any reason for belonging to it. The management was now opposed to the original policy, which was still the prevailing one in Victoria. The Association had been approached on several occasions for the purpose of coming to an agreement whereby the A.N.A. might be recognized as a Friendly Society. Many members held the view that this change of policy was not sincere. Dr. Todd proceeded to describe the bond of union which impelled Friendly Societies to carry out the policy of mutual assistance. He spoke of the risk of a return of the A.N.A. to the former policy at the cost of the medical profession and admitted that in Victoria the rise in political significance had been effected through the medium of medical benefit. But he ventured to think that the organization of the New South Wales Branch was so strong that the A.N.A. would be unable to play one doctor off against another, should it be found that the change of policy was a means to an end. The A.N.A. had suggested that it was willing to alter its constitution so as to render it quite impossible for its members to develop a strong political activity. The A.N.A. was prepared to get rid of the honorary members and to restrict its membership to the benefit members. Further it was agreed that the A.N.A. would recognize the Common Form of Agreement with its income limit clause. The members would be prohibited from participating in current politics. The management had expressed its willingness to provide further safeguards, if the British Medical Association

would indicate what was still required. The Council had recognized that the members had held strong views on this subject and had therefore placed the matter before them in a manner which provided ample time and opportunity for arriving at a deliberate determination. He moved that the A.N.A. of New South Wales be recognized as a Friendly Society by the Branch, and that the members be permitted to give their services to it.

Dr. Lawes seconded the motion and based his support on the three concessions. In the first place, the A.N.A. was prepared to adopt the Common Form of Agreement, with its income limit clause, restricting the medical benefits to those whose income was within the limits imposed by the Branch. This was promised for the whole State and not only for a few districts as was the case with some of the recognized Friendly Societies. In the second place, those in power had undertaken to alter the constitution so as to exclude politics from the objects of the organization. In the third place the honorary members were to be excluded. He favoured the recognition, as he held the opinion that this step would bring some of the outstanding societies into line.

Subsequent speakers spoke very strongly against the proposal. Dr. Clarence Read stated that at present the A.N.A. was very meek and mild, and was ready to change its policy and constitution at the bidding of the medical profession. But could any one say for how long? If the constitution were changed now, why should it not be changed again when the body had become strong. He called attention to the manner in which this A.N.A. had treated the profession in Victoria. He called particular attention to a most significant fact. Sir George Reid had quite recently presided in London at a meeting at which a London Branch of the A.N.A. had been formed. He thought that this indicated that the policy of the Australian Natives Association was a progressive one along the lines of a political organization. He was convinced that if the profession helped it into power in New South Wales, they would compass their own destruction. There was no need for any increase in the number of Friendly Societies. He was of opinion that the Lodge difficulty was disappearing steadily and a little patience was needed to bring about a satisfactory solution of this problem. He pleaded most strongly for the rejection of the motion. His speech was warmly applauded.

Dr. Warren considered that Drs. Todd and Lawes were to be congratulated for having made such a good case out of such poor material. The members of the Branch in the country and in the metropolis had fought hard to keep the A.N.A. out and had succeeded in the past. If the meeting yielded now, it would place in the hands of the A.N.A. the weapon needed to crush the profession. On the other side, Dr. Carruthers doubted if it would be a wise policy to refuse the A.N.A. recognition, when they were willing to grant all that the British Medical Association asked for. The public would regard this action very unfavourably. He was prepared to support the motion if he were assured that the A.N.A. of New South Wales was a regular registered Friendly Society, and if it was prepared to adopt the Common Form of Agreement.

Dr. Gordon Craig spoke in calm, measured terms against the motion. He regarded the class of people catered for by the A.N.A. as evidence of the essential political nature of the organization. He pointed out that it was a wonderful society in Victoria and Queensland, and there was every indication that they would become a strong political society in New South Wales if the profession assisted them to prosperity.

Dr. Antill Pockley expressed wonder at the question being raised in seriousness. He reminded the members that during his term of presidency of the Branch, he had urged the Branch to have nothing to do with the A.N.A. The body was quite different now from what it was in those days, but the present weakness was due to the want of medical benefit. He held that all forms of contract practice were unsatisfactory, and if this were so, it would be illogical to increase it.

Dr. Stoker, of Wagga-Wagga, in a witty Irish speech, traced the origin of the A.N.A. from the time when with a large programme nothing was effected because there was

no propeller. He considered that the A.N.A. was posing as a reformed character at present, and he asked those present what they thought of reformed characters as a rule. The Murray was running very dry at the present time. It would be quite impossible to make members on the one side understand the difference obtaining on the other. He did not trust the body, and to the delight of those present described it as being "moderately moral." The propelling power of this political engine was being sought in medical benefit.

The motion was put to the meeting and two members voted in its favour. On the President calling for a show of hands against the motion, a sea of arms shot up into the air. The motion was declared lost.

Gratuitous Treatment at Clinics and Hospitals.

Dr. R. H. Todd, the Honorary Secretary of the Branch, moved on behalf of the Council:—

"That no member of the Branch shall (except in case of urgency) either in an honorary or paid capacity treat any patient at any Public Venereal Clinic, unless adequate safeguards are taken to confine the benefits of the Clinic to persons who are unable to pay for private treatment at the hands of duly qualified Medical Practitioners."

Dr. Todd proceeded to explain the conditions which had led up to the proposals of the Council in connexion with the policy of the Minister of Public Health for dealing with venereal diseases. It appears that a member of the Branch had applied to the Council for advice in regard to an offer which he had received from the Department of Public Health. As has already been announced in the *Medical Journal of Australia*, a Venereal Night Clinic was opened in the Board of Health in July last, and the services of a member of the Branch had been secured. Within a few weeks of its inception, the medical officer joined the A.A.M.C. and left Australia with the first Expeditionary Force. The scheme was not dropped, but for a few months no further development took place. During recent times, negotiations were conducted between the Minister and the authorities of the Royal Prince Alfred Hospital. The conditions under which this scheme was to be worked were that the patients should come either at night time or at some other period of the 24 hours, that no name or address should be ascertained, and that no enquiries should be made into their circumstances. The Medical Staff of the Royal Prince Alfred Hospital, supported by the Board of Directors, refused to accept these terms, and endorsed the principle that enquiries should be made into the circumstances of all patients attended to at the hospital, and that treatment should be refused in all cases save when the patient was unable to pay for treatment. A further proposal was made to the Directors, namely that the accommodation of the Hospital should be placed at the disposal of the Department of Public Health, and that the entire responsibility of treating persons suffering from venereal diseases should be accepted by the Government. This proposal was rejected. The third alternative of the Minister was thereupon developed. This was to re-institute the clinic at the Board of Health. The member approached was offered the position of consulting and supervising physician at a rate of remuneration of two guineas for two hours per week. The member consulted a number of prominent members of the Branch and decided to accept the position, provided that in the event of a decision being arrived at by the Branch that the position was not in the interests of the profession, he should be free to resign. He then submitted the question of principle to the Council. Dr. Todd applauded this action. The Council had considered the matter and had come to the conclusion that a most vital principle was involved. But in order that the significance of a declaration of policy of the Branch might be clearly understood and weighed, the Council had come to the conclusion that the discussion should be limited to the specific question of venereal clinics. Dr. Todd pointed out that the profession was anxious to do all that lay in its power to deal adequately with venereal disease, but he was strongly of opinion that venereal clinics, especially if the name and identity of the patient were not disclosed, would not effect a reduction of the incidence of the diseases in question. The profession had always held that gratuitous attendance

should only be given to the poor, and the opportunity was now given to formulate this principle to a specific case. It was easy to argue from the general to the particular; but the reverse was fraught with dangers. The proposals of Mr. Flowers would subject the profession to the risk of private practice being undermined. Independence of the medical profession was essential in the public interest and also in the interests of the profession. A public medical service would destroy the high standard of efficiency. He did not hesitate to say that the great disadvantage of a public service was that the medical men holding governmental positions and receiving salaries tended to become less keen and to exhibit less individual ability than the men who practised in competition with their colleagues in private practice. The question involved a principle which might have serious consequences to some members of the profession, notably those who were employed in the Governmental service. But if the principle was right, the duty of the Branch was clear. Individual interests must not be allowed to stand in the way of the carrying through of principles which were in the interests of the public and of the profession. In regard to the aim of the Government, he was satisfied that this was sincere but mistaken. He doubted whether any mode of treatment was capable of effectively reducing venereal disease, but were such a treatment discovered, he held the opinion that the best results would be effected by the private practitioner and not by a Governmental department.

Dr. Todd proceeded to read a letter which he had received from the Under-Secretary on the previous day. The letter was as follows:—

Office of Minister of Public Health,
Sydney, 27th January, 1915.

Sir,—I have the honour, by direction of the Minister of Public Health, to say that it has been brought under his notice that certain very important resolutions affecting the conduct of Night Clinics for Venereal Diseases will shortly be discussed by your Association. I have to say that the Minister will take it as a compliment if, before coming to any final decision, representatives from your Association could be deputed to wait upon him, in order that the matter might be discussed and the Minister's intentions and views properly understood.

Your obedient servant,
G. H. KING,
Under Secretary.

The Secretary to the British Medical Association,
30-34 Elizabeth Street, Sydney.

He proposed that the whole question should be discussed that evening without reserve; that the meeting be adjourned after the discussion had revealed the views of the majority of the members; that a deputation be appointed to wait on Mr. Flowers to hear his views on this matter, and, lastly, that the deputation should recount to the adjourned meeting a fortnight later what these views were, after which a resolution could be passed. Before he sat down, he announced that he had received 38 proxies and a number of letters from members unable to attend in which strong views were expressed.

In the discussion which followed, and which was continued to a late hour, there was a general consensus of opinion that treatment should not be given at hospitals or clinics to persons who were able to pay for the treatment elsewhere. A very large number of members illuminated the questions involved from every point of view. The difficulty which the meeting had to face revolved around the extent of the application of the principle. Practical unanimity existed as to the ideal extension of the principle to all forms of disease, but a material difficulty was experienced in regard to the position of medical men holding public service appointments. After Dr. Clarence Read had seconded the original motion in a very impressive speech, Dr. Antill Pockley moved an amendment, to the effect that the term *Venereal Clinic* be deleted in favour of the term *Hospital*. Dr. Read recognized the difficulty in regard to the men in Government service, and urged the institution of a strong guarantee fund and asked the members to see their colleagues in this service through any difficulties which might follow from the passage of the resolution.

He was further of the opinion that it would be possible for the Branch to cut off the supply of medical men willing to serve the Government, if the present holders of the positions were forced to choose between the Association and the acceptance of posts involving the duty of attending to persons who could afford to pay for treatment outside. Dr. Pockley spoke bitterly of the policy of the Government in endeavouring to nationalize the hospitals. He instanced the want of sincerity in the movement of the travelling ophthalmic hospital, which was to have limited its activity to the districts beyond the reach of medical practitioners, but which had started straight away to inspect and treat school children in every populous town and district from Sydney to Albury. He was convinced that Mr. Flowers was well aware that the profession would be able to carry its policy through, and his letter was merely an attempt to provide a road for an easy retreat. He wanted to establish the widest principle. Dr. Woolnough seconded the amendment, calling attention to the declaration of the policy by Mr. Flowers of throwing the hospitals open to all who could be induced to seek its aid, without distinction of financial position.

Sir Herbert Maitland, speaking earnestly, plausibly and with great caution, bade the members to remember that it would be impossible to extend satisfactory financial assistance to Government medical officers, should these men come out because of the declaration of the wider policy. He declared that these men could not afford to give up their positions. He approved in theory of the widest application of the principle, but attempted to find a safeguard to protect the interests of the Association members in public service.

Dr. Scot Skirving, who met with a hearty welcome, made a delightfully impulsive speech, carrying conviction to the minds of his audience by his genuine enthusiasm. He pointed out that they were dealing with a Labour Government. They too were a union. No stronger argument could be used by a man, than the argument which the public service men could use to the Government, if they were threatened with dismissal. They could say, "We cannot turn dog against our union." He held the whole programme in connexion with venereal disease up to ridicule, and in emphasizing the view that the secrecy suggested would defeat its own end, since every person refusing to give his name at the hospital would be detected as a sufferer from gonorrhœa or syphilis, he referred to the class of person attending the venereal clinic, and spoke sarcastically of "super-venereal circles," much to the delight of the meeting.

Dr. Sinclair Gillies supported the original motion, because he saw difficulties in the way. The amendment would render it impossible for every medical officer at the Coast Hospital, at the hospitals for the Insane, and in every other department of the Health Board, to resign the membership of the Association. Dr. Sandes could not bring himself to accept the sincerity of the Government, and traced the whole campaign to the planks of the Labour party. Dr. Worrell spoke seriously and with telling effect of the difficulties which had been successfully met in regard to the remuneration of the public service medical officers. The profession had improved their wholly inadequate rate of remuneration. The Branch had called upon the general practitioner to resist the pressure of the Lodges, and the men had not received compensation. Why should the medical officers in the public services for whom much had been done, expect to receive better treatment? Dr. Vallack and Dr. Hastings spoke briefly, and Dr. George Armstrong issued a warning to the meeting that if Dr. Pockley's amendment were carried, they would be incurring a serious risk. This would take the shape of the rapid training of young men by the Government as specialists in venereal diseases, and the equipment of special institutions where the public would be tempted to attend. He was of opinion that the profession was strong enough to engage in a fight against Trades Hall, and if they were beaten, they must just take their beating like men. He thought that they would win. Dr. Lamb O'Neill and Dr. Oxenham made some further suggestions, and Dr. Schlink advocated a fierce war against the attempt to ruin the profession. Dr. Stoker also spoke.

After many proposals, none of which appeared to satisfy the majority of the members present, an attempt was made by Dr. Todd to obtain an adjournment. This failed, clearly because the men wished to show the Government in unmistakable terms that no arguments could convince them that this movement was disinterested. The majority held the view that the venereal programme had the primary object of snatching votes. Since the adjournment was dismissed, it was necessary to find a formula which would procure the best safeguard for the medical officers in the public services. The solution eventually accepted was contained in a rider to the original motion, proposed by Dr. Worrell. The motion, together with the rider were put to the meeting and carried unanimously; that is by approximately 120 medical practitioners present, and by 38 voting by proxy. The resolution, as carried, read as follows:—

That no member of the Branch shall (except in case of urgency) either in an honorary or paid capacity treat any patient at any Public Venereal Clinic, unless adequate safeguards are taken to confine the benefits of the Clinic to persons who are unable to pay for private treatment at the hands of duly qualified medical practitioners, and that the President having ruled, with the endorsement of the meeting, that the passing of the above resolution establishes a principle which shall be applicable to all diseases, such principle may be acted upon by the Council at its discretion.

The following have been nominated for election to the New South Wales Branch:—

Dr. Francis Temple Grey, Randwick.
Dr. Wm. A. McDonald, Lidcombe.
Dr. Gordon Alick Renwick, Glebe Point.
Dr. George D. K. Waldron, Royal Prince Alfred Hospital.
Dr. Henry H. Willis, Royal Prince Alfred Hospital.

BRITISH MEDICAL ASSOCIATION (AUSTRALIA) MILITARY MOTOR AMBULANCE FUND.

The number of subscriptions to the Military Motor Ambulance Fund received during the past fortnight is disappointingly small. An announcement will be made in next week's issue of the intention of the Federal Committee concerning this fund. The number of subscribers since the publication of the last list is 24. The fund has been augmented to the extent of £34 1s., and the total amount up to date is £1348 4s. 3d.

	£	s.	d.
Dr. Brett, Percy, Toorak, Vic.	1	1	0
" Brummitt, R., Medindi, S.A.	1	1	0
" Brummitt, E. A., Medindi, S.A.	1	1	0
" Callaghan, J., Normanton, Q.	3	13	6
" Coen, Joseph, Lismore, N.S.W.	1	1	0
" Connolly, H. A., Warracknabeal, Vic.	1	1	0
" Connolly, J. W., Boulder, W.A.	1	1	0
" Glassford, J. G., Bairnsdale, Vic.	2	2	0
" Green, C. W., Maryborough, Q.	1	1	0
" Halford, G. B., Malvern, Vic.	1	2	0
" Hawkins, Ethel, Launceston, Tas.	0	10	0
" Hunt, George, Blackheath, S.A.	1	1	0
" Jermaine-Lulham, F. S., Melbourne	2	2	0
" Kennedy, T. J., Geelong, Vic.	2	3	0
" Kirkaldy, W. B., Kalgoolie, W.A.	1	1	0
" Lovegrove, Fred., Tambellup, W.A.	1	1	0
" Nelson, W. H., Greenbushes, W.A.	2	3	0
" O'Meara, P. M., Southern Cross, W.A.	2	2	0
" Patrick, J. F., Scottsdale, Tas.	4	10	0
" Smith, E. Temple, Sydney	2	2	0
" Stacy, H. S., Sydney	1	1	0
" Stang, T., Victoria	1	1	0
" Stewart, A., Dalby, Q.	1	1	6
" Stillwell, Effie, Hawthorn, Vic.	1	1	0

Medical Societies.

(Affiliated with the British Medical Association)

CENTRAL SOUTHERN MEDICAL ASSOCIATION.

The annual meeting of the Central Southern Medical Association was held at Goulburn on January 22, 1915. Dr. J. English (the President) in the chair.

The following motions were passed:—

(a) That the members of the Central Southern Medical Association will recognize Friendly Society Dispensaries as suitable places for the making up of prescriptions, only when the profession is granted full right of inspection, and when such right is granted in writing to the members of the Association, provided that, until the Friendly Societies accept the Common Form of Agreement, the Association members in Goulburn do everything in their power to see that their prescriptions are dispensed as heretofore.

(b) That the Council's decision to receive representatives of the affiliated associations at their regular quarterly meetings be cordially received, and that Dr. W. A. H. Burkitt, of Goulburn, be appointed the representative of the Central Southern Medical Association for the year 1915.

(c) That the members of the Central Southern Medical Association be urged to attend, when necessary, the dependents of men serving in the army and navy who have gone to the war, free of charge, and that individual cases of distress be left to the discretion of their medical attendants.

Dr. G. A. Buchanan (Goulburn) was elected delegate for the year 1915.

Dr. R. O. Williams was elected auditor.

The following were elected members of committee for the year 1915:—

President: Dr. D. T. Harbison (Bowral).

Vice-President: Dr. W. A. H. Burkitt (Goulburn).

Honorary Secretary: Dr. G. A. Buchanan.

Honorary Treasurer: Dr. C. A. Hogg.

Members of Committee: Drs. H. F. Alsop, J. English, A. P. Gillespie, W. S. Harvison, S. W. Morton, R. D. McMaster.

Dr. J. English, the retiring President, gave an address on some outstanding peculiarities he had met with in obstetric practice. These included observations on urine testing before parturition, eclampsia, placenta prævia, centrifugal respiration of the newly-born, use of mucus extractor, diagnosis of presentation by external examination, suturing of lacerations caused by child-birth, enteric fever in the puerperium, appendicitis in the puerperium, and obstruction of bowels in newly-born child not due to imperforate anus.

Dr. G. A. Buchanan exhibited a rare case of *zoster atypicus gangrenosus* (Kaposi), with clinical notes on the case.

The visitors were entertained at dinner by the Goulburn members, and later by Dr. Gillespie.

Public Health.

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, for the week ending January 23, 1915:—

Notifiable Disease.	Cases.
Diphtheria	20
Enteric Fever	28
Phthisis	12
Infantile Paralysis	5
Ankylostomiasis	3
Erysipelas	1
Scarlet Fever	3
Total	72

THE HEALTH OF NEW ZEALAND.

The Inspector-General of Hospitals and Chief Health Officer of New Zealand has issued his report dealing with the work of his department for the year ending March 31, 1914. As an introduction to the record of the public health

in the Dominion, he gives a brief summary of the vital statistics for 1913. 27,935 children were born during the year, which is equivalent to a birth-rate of 26.14 per 1,000 of population. The birth-rate has decreased 26% since 1882. One thousand one hundred and eighty-one of the children born were illegitimate. In 1912, 9149 marriages were solemnized. The proportion of illegitimate births to every marriage of the previous year was 1:2.81, whereas in 1893 it was 1:4.37. In 1880, New Zealand had the highest birth-rate in Australasia; in 1913, with the exception of Victoria, it had the lowest. There were 314 cases of twins, and 1 of triplets during the year. The marriage-rate was 8.25 per 1,000 of population, which represents an increase of 24% since 1882. In regard to the age of persons married, 159 bridegrooms and 1394 brides were under 21 years of age. Two of the bridegrooms were between 16 and 17 years of age, and 7 of the brides were between 15 and 16 years of age.

The number of deaths registered in New Zealand during the year was 10,119. This yields a death-rate of 9.47 per 1000 of population. The death-rate was 13% lower than that of 1882; the rates in the interval, however, have been somewhat irregular, the average working out at 10.1. The male death-rate was 10.46, as compared with a female death-rate of 8.88. The index of mortality, i.e., the per milleage rate as compared with the percentage rate of the population in five age groups of Sweden in the year 1890, taken as a standard, was 1.63, 0.96, 1.08, 1.95, and 6.3 for the age groups under one year, over 1 and under 20, over 20 and under 40, over 40 and under 50, and over 60. The total works out at 11.92. The index of mortality for the year 1912 was the lowest in Australia, being 11.27, while Victoria showed the highest, at 14.94.

The infantile mortality is dealt with separately. During the year 1913, the proportion of deaths of infants under one year of age to every 1,000 births was 59.17. Of the total number of deaths of infants under one year of age, which was 1,653, 830 were of infants under one month. The ratio of male and female deaths was 100 : 75. The Statistician gives a table comparing the infantile mortality rates of the various countries and cities. The highest rate mentioned is that which obtained in Moscow in 1912, viz., 333. The highest country rate was Chile, at 332. Austria and Hungary had an infantile mortality rate of 207, Ceylon one of 218, Germany one of 192, Japan one of 166, England and Wales one of 130, France one of 111, and Australia one of 72. In Vienna, the rate was 149, in Berlin it was 142, in Paris it was 103, in London it was 91, in Sydney it was 79, in Amsterdam it was 64, whereas in Auckland it was 81, in Dunedin it was 73, in Christchurch it was 63, and in Wellington it was 60.

Of the 1653 deaths affecting children under one year of age, 418 are ascribed to premature birth, 296 to congenital debility (it is unfortunate that statisticians are forced to tabulate the causes of death affecting marasmic infants under this generic term), 214 to diarrhoea and enteritis, 157 to bronchitis and pneumonia, 89 to malformations, 87 to pertussis, and 71 to convulsions. In view of the fact that convulsions are symptoms and not a disease, it would be well if an attempt were made to discover the various causes in each case.

In regard to the causes of death, 1,791 out of 10,119 were due to pathological lesions of the vascular system; 1,272 were due to organic cardiac lesions, 389 to cerebral hæmorrhage and embolism. Of the diseases of the nervous system, simple meningitis is said to have caused 127 deaths and epilepsy 54. Under the heading diseases of the respiratory system, bronchitis and broncho-pneumonia accounted for 435 deaths, while pneumonia caused 336. In regard to abdominal conditions, 91 deaths were due to appendicitis and typhilitis, 63 to intestinal obstruction, and 47 to cirrhosis of the liver. Two hundred and thirty deaths were due to Bright's disease, 16 to acute nephritis, and 71 to uræmia. In regard to infective diseases, tuberculosis caused 812 deaths, of which 578 were due to pulmonary tuberculosis; pertussis caused 128 deaths, diphtheria 61, enteric fever 60, influenza 56, morbilli 26, and scarlatina 11.

The number of deaths due to malignant disease is given at 856. In 1909 the number was 711, in 1910 it was 742, in 1911 it was 809, and in 1912 812. There were 8.01 deaths from cancer per 10,000 persons living. This rate is higher

than that of tuberculosis, which was 7.6. Moreover, the rate has increased steadily from 6.5 in 1905, whereas the tuberculosis rate has diminished almost as regularly from 9.46 in 1904. The ages of persons dying from what is spoken of as cancer varied between infancy and extreme old age. On the other hand 94% of the deaths affected people of 35 years or over, and 57% affected people of 60 years and over. Four hundred and forty-six males died of malignant disease, as compared with 410 females. The seat of the disease was as follows: Stomach and intestines 360, mouth, lip, tongue and neck 125, liver 100, female genital organs 78, breast 64, urinary system 35, and other organs 94. The death-rate from malignant disease per 1,000 of population in some of the principal countries is given in the following table:—

Country.	Average Increase per		
	5 years: 1896-1900.	5 years: 1906-10.	10 years.
New Zealand	0.59	0.72	22.03
Commonwealth of Aust. .	0.58	0.70	20.69
England and Wales .. .	0.80	0.94	17.50
Scotland	0.77	1.00	29.87
Ireland	0.58	0.79	36.21
German Empire .. .	0.66	0.84	27.27
Austria	0.69	0.78	13.04
Italy	0.51	0.64	25.49
Norway	0.86	0.97	12.79
Netherlands	0.92	1.03	11.96
Switzerland	1.27	1.26	0.79*

* Decrease.

One hundred deaths were notified in connexion with pregnancy and child-birth. Twenty-nine of these were due to puerperal septicæmia, 25 to accidents of pregnancy, 14 to puerperal hæmorrhage (? post-partum hæmorrhage), 17 to other accidents at child-birth, and 10 to puerperal albuminuria and convulsions (? eclampsia and uræmia). In 1904, 4.66% of women in child-birth died. In 1906 the rate dropped to 3.91, but rose again in the following year, and reached 5.14 in 1909. In 1910 it was 4.55, in 1911 4.38, in 1912 3.73, and in 1913 3.62.

A separate report deals with local vital statistics. The Auckland Health District, including the city of Auckland and the boroughs of Birkenhead, Devonport, Grey Lynn, Mount Albert, Mount Eden, Newmarket and Northcote, is dealt with. The birth-rate for the city was 23.23, and for the boroughs 25.93 per 1,000 of population. The death-rate was 11.49 and 10.61 for the city and boroughs. The district health officers append reports for their various districts, which reports contain a large amount of important and interesting information. Only a few points can be dealt with in this place.

During the year 1913, 203 cases of scarlet fever were notified in Auckland, 760 in Wellington, Hawkes Bay, Nelson and Marlborough, 449 in North Canterbury, Westland and Southland, and 202 in Otago. The disease was mild in type. Diphtheria was somewhat prevalent. In Auckland, 247 cases were notified, in Wellington 254, in the Christchurch district 227, and in the Otago district 19.

A considerable increase in the number of cases of enteric fever notified in the Auckland district is recorded. In 1909, 206 cases were notified, in 1910 there were 197, in 1911 there were 346, in 1912 252, and in 1913 412. The increase affected the country districts more than the city. Two hundred and thirty of the patients were Maoris. The Medical Officer is of opinion that, with increased inspection and control by the native Sanitary Service Nurses, a still larger incidence of the disease among the natives will be discovered. He does not believe that the natives are more susceptible to the disease now than in the past. He attributes the spread among the Maoris to the drinking of polluted water. In the Wellington district 420 cases were notified. This number is considerably in excess of the numbers notified in 1911 and 1912. The outbreak in Gisborne, which affected the European population was, on the whole, of low virulence. The Dunedin Health Officer reports that only 4 cases have occurred in his district. Tuberculosis has increased in frequency in Auckland during recent years. In 1913 246 cases were notified. In Wellington the number was 241, and in Dunedin 130.

Special chapters are devoted to the subject of small-pox, leprosy and plague. In the Auckland district, 466 cases of small-pox were recorded. The Health Officer states that only about one-quarter of the cases among the Maoris were seen by medical men, and that the total number is considerably larger than that given. He estimates that 111 Europeans and 1,777 Maoris were affected. A lucid account is given of the outbreak which started early in July. At first it was thought that the disease was varicella, but the death of a native and the similarity of the disease to that occurring in Sydney led to a closer investigation of the individual cases and method of spread. A large number of medical men were engaged to control the population in the various districts, and perform vaccination. The Board of Education was enjoined to render assistance by excluding unvaccinated children from the school. It was found impracticable to carry this into effect, but the parents were persuaded in a large number of instances to have their children vaccinated. The tramway, railway and shipping companies were warned, in virtue of Section 18 of the Public Health Act, to refuse to carry natives who could not produce certificates of vaccination. It is stated that the first person known to have had the peculiar rash was a Mormon missionary, who joined the s.s. "Zealandia" at Vancouver on March 19, 1913, and landed in Auckland on April 8. He stayed in Auckland for four days, and proceeded thence to Whangarei. From here he travelled to Maromakn, and on April 14 he reached Te Hora, where he was taken ill. In Wellington, precautionary measures were adopted, and a certain number of suspects were kept under observation. Four cases of small-pox occurred.

The Auckland Health Officer reports that no case of plague in man or in rats had occurred. 7,974 rats were examined bacteriologically, with negative results. The control of rats and the improvement in the sanitary conditions of the waterfront were largely responsible for the absence of any cases of plague.

In the leprosy report three cases are dealt with. The patients were at Quail Island Quarantine Station, Lyttelton. One patient was suffering from advanced disease, and was getting steadily worse. He was attacked with recurrent fever, was weak, lame and blind. The second patient was improving. He was stout, strong and healthy-looking. It appears that he was suffering from the anæsthetic form of the disease. The treatment consisted of giving salicine and antileprol. The third patient was a case of anæsthetic leprosy in the state of quiescence.

In regard to the sanitary condition of the various districts, the District Health Officer of Auckland reports that the work of the Drainage Board in Auckland city is progressing. He advises an extension of the sewage system throughout the suburbs. In the suburbs a breakdown in the night-soil service occurred toward the end of the year. While tentative measures are being adopted for the purpose of dealing with the problem of the disposal of night-soil and garbage during the interval until the sewage system is completed, the Health Officer complains of the highly unsatisfactory conditions obtaining. In regard to the country districts, difficulty is experienced from the fact that the Maoris live half in and half out of civilization.

In Wellington the drainage system has been extended, and is now satisfactory. In some of the country districts, pollution of rivers with night-soil has occurred, and attempts have been made to remedy the defect. A satisfactory state of affairs is reported from the Christchurch district.

The public health portion of the report closes with a short account of the Native Nursing Service. The nurses have done excellent work in camp hospitals during the small-pox epidemic, and also during the outbreaks of enteric fever. It is further stated that the nurses have succeeded in many districts in getting the natives to adopt modern hygienic methods.

In Auckland, no midwives were suspended on account of the occurrence of puerperal septicæmia, but three unregistered women were warned not to attend cases. In Christchurch there were several suspensions. One unregistered midwife was prosecuted, and the license of a maternity hospital was revoked.

The report of the Bacteriological Laboratory at Wellington, under the directorship of Mr. J. A. Hurley, contains

much interesting information in regard to the work carried out in the laboratories.

As an appendix to the report, brief records of the various hospitals, homes and other charitable institutions are given. Included in these records are the names of the honorary and paid medical staff, and the name of the matron and the extent of the work undertaken. A number of tables are attached, setting forth the detailed expenditures of the various institutions.

LEPROSY IN PERTH.

On January 7, 1915, a police constable stationed at Leederville, Perth, reported to the Health Department that he had seen a Chinaman at work in the vegetable gardens at Leederville with open sores on his hand, which the constable thought were such as to be detrimental to the health of the community amongst whom the vegetables were delivered. The Chinaman was accordingly brought in to the Health Department, and a consultation was held by Drs. Gellé, Mitchell, Andrew, Hope, Atkinson and Shearman, who unanimously agreed that the condition was one of mammo-anæsthetic leprosy. Swabbings from the affected man's nose were taken, and revealed the presence of acid-fast organisms, which, in view of the indubitable nature of the infection could only be regarded as leprosy bacilli.

Immediate steps were taken to have the man isolated. He was placed temporarily at the Quarantine Station at Woodman's Point pending a suitable opportunity to have him removed to the Lazarette at Bezant Island.

Vital Statistics.

VITAL STATISTICS OF BRISBANE.

The Government Statistician of Queensland has issued the statistical returns of the births and deaths of Greater Brisbane for the month of December, 1914, and has appended a summary of the figures for the whole year.

In regard to the returns for December, it appears that 398 births were registered. This number is 16 less than in November. The birth-rate per 1000 of population is thus 2.63, which is equivalent to an annual birth-rate of 31.56. This rate is higher than the birth-rate in Sydney or Melbourne.

The number of deaths within the metropolitan area is markedly smaller than the number in November, 1914, or than the number in December of 1913. One hundred and seventy-five deaths were registered in the month. As is the rule males were more affected than females the respective numbers being 93 males and 82 females. In November there were 217 deaths registered. The death-rate was equivalent to an annual death-rate of 13.92. This figure appears to be the crude death-rate; the Statistician does not supply information on which the corrected death-rate can be calculated. Fifty-three deaths of children under five years were registered, and 42 under one year. Seventy-five deaths took place in the various public institutions. During the month, 1,527 persons were treated in these institutions.

The meteorological conditions are dealt with in a separate table, but no very apparent connexion between the incidence of disease or mortality and the weather conditions can be detected.

In a further table the causes of death are analysed. In the first place, of the infective diseases, tuberculosis heads the list with 9 deaths, of which 6 were due to pulmonary tuberculosis. Enteric fever caused 5 deaths, diphtheria, tetanus, and acute rheumatism each caused 2 deaths, while influenza, erysipelas, and syphilis each caused one death. Malignant disease, spoken of as "cancer" in the returns, but probably including all forms of malignant new growths, caused 10 deaths.

The deaths due to disease of the heart and circulatory system and apoplexy numbered 38. Sixteen of these were due to chronic cardiac lesions, and in three cases the cause of death was acute endocarditis. Pathological changes in the nervous system, excluding apoplexy, killed 13 persons; those in the respiratory system, exclusive of tuberculosis, killed 11 persons; and those of the digestive system, exclusive of diarrhoea and enteritis and enteric fever, killed 11 persons. Diseases of the kidneys and urinary bladder

terminated fatally in 14 instances. There was one death from puerperal septicæmia and one from accident in child-birth.

The number of deaths from diarrhoea and enteritis was 23, 21 of which affected children under 2 years of age. Among the deaths occurring in children under one year of age, the nature of the disease in 13 instances is stated to be "infancy." We enter a protest against this loose method of classifying causes of death. Infancy is neither a disease nor yet a cause of death, and if the vital statistics are to be of any value, the information collected should be properly analysed and tabulated.

The summary for the year, which is published "subject to slight alterations," contains *inter alia* the following information. During the year 1914, 5,246 births were registered in the metropolitan area. The crude birth-rate was 34.68, and that of the year 1913 was 34.37. The number of deaths registered during the year was 1,936, as compared with 1,944 in 1913. The crude death-rate was 12.8 per 1,000 of population, as compared with 13.12 in 1913. What the Statistician terms "true infant mortality" was 7.09 in 1914, and 8.01 in 1913.

The causes of death may be summarized as follows:—

Infective Diseases: Tuberculosis 126, including 110 from pulmonary tuberculosis and 2 from Addison's disease, diphtheria 32, influenza 26, enteric fever 18, syphilis 12, acute rheumatism 11, pertussis 10, tetanus 10, erysipelas 6, dysentery 5, septicæmia 4, scarlatina 2, malaria 1, and sprue 1.

Diseases of the circulatory system caused 330 deaths, including 179 from so-called organic diseases of the heart, 72 from cerebral hæmorrhage, and 13 from acute endocarditis.

There were 138 deaths from pathological changes in the nervous system, including "progressive locomotor ataxy," which we presume to mean *tabes dorsalis*, since all locomotor ataxy is progressive (one case), and five deaths from "hysteria, neuralgia and neuritis." The diagnoses in these five cases we presume were not confirmed by post-mortem examination.

One hundred and fifty-six deaths were due to changes in the respiratory organs; 110 from diseases affecting the digestive organs, excluding diarrhoea and enteritis, and sprue; 158 deaths were caused by diseases of the genito-urinary organs.

Malignant tumours are said to have caused death in 175 cases. In 65 of these the tumour was situated in the stomach and liver, in 18 the tumour was in the intestines or peritoneum, and in 14 it affected the female genital organs.

Deaths occurring during parturition or the puerperal state included 11 due to septicæmia, 6 to eclampsia, 6 to "accidents of pregnancy," 2 to "other accidents of child-birth," and 1 each to puerperal hæmorrhage and "sudden death." The deaths in infancy are ascribed to congenital debility, icterus and sclerema in 105 instances and other diseases peculiar to infancy in 26 instances. This information is of small value to the hygienist who, in seeking a remedy, must know what these deaths are really due to.

Hospitals.

THE ADELAIDE BABIES' HOSPITAL.

The new Babies' Hospital in Winchester Street, St. Peters, was formally opened on January 20, 1915, Lady Galway performing the ceremony. The wards and verandahs were prettily decorated with roses and gifts of baby clothing and fittings for the cots were artistically arranged on a special table outside one of the wards. The function took place in the "Mary" Ward, a ward to be set aside for acute cases. It is suggested that this ward will be supported by the "Marys" of Adelaide. The speeches at the opening were brief, earnest and to the point, and had the effect of abstracting over £40 from the pockets of the guests in aid of the institution. A special ward named "Memory" will be the dedication-room of the hospital, and will contain endowed and gift cots from benefactors. Mrs. Teesdale Smith, who has benefited the hospital to no small extent, has christened a small ward "The Katie Room" after her

daughter. Lady Galway is the President of the Institution, and Mr. J. Ford, the Mayor of St. Peters, and Mr. S. H. Skipper are taking an active part in the establishment.

SOUTH SYDNEY HOSPITAL.

The annual general meeting of the South Sydney Hospital was held at the Redfern Town Hall on January 27, 1915. The President, Mr. Joynton Smith, M.L.C., conducted the meeting. The hospital was opened in the year 1913, and, during its short existence, has accomplished a large amount of important work. It contains 40 beds, but a suggestion has been made to increase this number to 80. During the year, 770 in-patients were dealt with. Of these, 498 received gratuitous treatment. The balance of the patients contributed the sum of £472 4s. 1d. In the out-patient department 6,480 attendances were given. The Treasurer, in his report, gave a satisfactory account of the financial position of the hospital. The liabilities had been decreased by over £250 through the support given by the Minister of Public Health.

University Intelligence.

We understand that the Council of the Melbourne University is considering a proposal to modify the condition of the competition for the best designs for the new University buildings. Representations have been made to the Council that the conditions announced would exclude architects in other States from taking part. Among other alterations, it is suggested that plans of the present buildings should be furnished to intending competitors to enable them to harmonize the proposed new buildings with those already in existence.

Professor John Wyllie has resigned the professorship of Medicine at the University of Edinburgh. Professor Wyllie has occupied the Chair since 1900. He was physician to the Royal Infirmary for fifteen years, consulting physician to the City Hospital for Fevers for four years, and senior president of the Royal Medical Society of Edinburgh in 1866.

Special Correspondence.

(From our Special Correspondent.)

LONDON LETTER.

Work of the Metropolitan Asylums Board.

The annual report of the Metropolitan Asylums Board, issued in August, states that, during the year 1913, 33,994 cases of zymotic disease were notified in the metropolis, as against 25,237 in the previous year. Of these, 26,560 were legally admissible into the Board's hospitals. The cases of scarlet fever admitted number 15,010; of diphtheria, 5,475; of measles, 3,400; of tuberculosis, 1,889; of whooping-cough, 1,044; of enteric fever, 238; cerebro-spinal fever, 5; typhus, 4; and small-pox, 1. The average death-rate in scarlet fever was 1.3; in diphtheria, 6.2; in enteric, 16.2; in cerebro-spinal fever, 60.0; in whooping-cough, 12.8; and in measles, 11.3. The number of patients admitted to the asylums was 943; discharged or transferred, 177; died, 739; and remaining, 7,298. To the institutions for the feeble-minded patients, 135 were admitted, 25 discharged, 2 died, and remaining 546. The number admitted to the children's institution was 5,468. The total number of patients admitted to the casual wards was 46,670; 46,829 were discharged, and 382 remained. The number of boys received at the training-ship "Exmouth" was 368; 98 were discharged to the Royal Navy, 171 to the mercantile marine, 7 to the Army, 94 discharged, leaving 700. There were no deaths. The area of district served by the Board is 121 square miles, with an estimated population of 4,518,191. In the land service of the ambulance work there were 70,266 removals, this including 27,617 persons removed from home to hospital, and 29,622 individuals suffering from zymotic disease, as well as 13,027 other persons. By the river service, 1,368 out of a total of 3,217 passengers, including staff and recovered patients, were taken down the river to the Board's hospitals. The general expenditure for the year was £1,114,800. The separate items of this account

were: Hospitals, £338,435; ambulance services—land £27,277, river £5,402; training ship, £32,183; children's homes and schools, £124,492; casual poor, £29,708; general expenses, £329,457; the Downs Sanatorium, £15,145. The total number of persons in the various institutions at the end of the year was 23,704, of which 6,206 were permanent staff, 387 temporary staff, and 17,111 inmates. The net expenditure met out of rates represented a rate of 5.79 pence in the pound, as against 6d. for the previous ten years.

Health in War Time.

Sir William Osler, Regius Professor of Medicine at Oxford, addressed a large meeting of officers and men in camp at Churn, early in September, on the question of the prevention of disease among troops on active service. He pointed out that it had formerly been asserted that an army marched on its belly, but nowadays it was more accurate to say that it marched on its brains. Only by utilizing fully existing knowledge, in all grades, from Commander-in-Chief to private, was the maximum of success available. To put the largest number of the enemy out of action with a minimum of loss to his own men was the aim of every general. While in one way modern war merged the individual in a great machine, on the other hand the intelligent action of the unit had never been so important a factor in making the machine work smoothly and efficiently. After all, it was the man behind the gun who won the victory.

It was a bitter experience for our country to lose thousands of the best of our young men in a hideous war, but it added terribly to the tragedy to think that more than one half of the losses might be due to preventable disease. Typhus fever, malaria, cholera, enteric fever, and dysentery had won more victories than powder and shot. Some of these diseases need no longer be dreaded. Typhus and malaria, which 100 years ago routed a great English army in the Walchern expedition against Antwerp, were no longer formidable foes. But enough remain, as we found by the sad experience in South Africa. Of the 22,000 lives lost in that war bullets accounted for only 8,000, bacilli for 14,000.

The Japanese went into the Russian campaign prepared as fully against bacilli as against bullets, with the result that the percentage of deaths from disease was the lowest that had ever been attained in a great war. We were not likely to have to fight three of the greatest of former scourges, typhus, malaria, and cholera, though the possibility of the last had to be considered. But there remained dysentery, pneumonia, and enteric fever, against two of which we should be able to bring to bear successfully the resources of modern science.

Dysentery and pneumonia were more or less inevitable, but by careful prophylactic measures their incidence could be reduced to a minimum. On the other hand enteric fever had hitherto proved the bacillary scourge of modern warfare, and had been responsible for thousands of deaths among troops before they ever reached the firing line. A great advance had been made in connexion with the prevention of enteric fever in recent years, so that comparative immunity could now be secured by the simple process of anti-typhoid inoculation. In the regular army of the United States where inoculation had been practised now for several years, the number of cases had fallen from 2.53 per thousand men to practically nil. In a strength of 90,646 there were in 1913 only three cases of typhoid fever. In France, the enteric fever rate among the unvaccinated was 168.44 per thousand, and among the vaccinated 0.13 per thousand. In India, where the disease had been very prevalent, the success of the measure had been remarkable. In the United States, and in France, and in some other countries this vaccination against the disease was compulsory. If the lessons of past experience count, any expeditionary force on the continent had much more to fear from the bacillus of typhoid fever than from bullets and bayonets. With a million men in the field, their efficiency would be increased one-third if we could prevent enteric. It could be prevented. It must be prevented; but meanwhile the decision was in the hands of those whom he addressed, and he knew it would be in favour of their King and country.

Opening of the Medical Schools.

The work of another year was entered upon, as usual, on October 1, 1914, but owing to the war the ordinary festivities were entirely dispensed with, and in only a very few instances were addresses delivered or other formalities observed. At King's College, Sir Wilmot Herringham, Vice-Chancellor of the University of London, delivered what may be described as a war address, in the course of which he said that probably it would be expected of him, on such an occasion, to say something of the part the University ought to play towards the country during the war.

There could be no doubt whatever that the first duty was to carry on the education of the country. Of all the products that we manufactured and that went to make up a country's wealth few were so expensive to make, and certainly none were so valuable or so difficult to replace, as educated men. No one was suffering so heavily by this war as the University itself. Its revenues were always of the nature of grants for a particular purpose, except the fees of students, and in that very large item he expected an immense drop. It has been estimated at no less than £20,000. Many of the teachers had already gone. Many students had volunteered, and about them he had ventured to pledge the University that they would do everything in their power to provide that their term of military service should not prejudice them in their University education. Some things they could not do. They were forbidden by law to grant degrees without examination, and he could not but think that students who were within measurable distance, say, six months, of their final examination would do better for the country if they would stay at home, work harder if need be than usual, and pass their examinations before they offered their services in the Army. Meanwhile they could be working in the Officers' Training Corps. Already at the end of the first month 700 of their men had volunteered.

He reminded his audience that Germany was a great nation, which must not be belittled. Its industry, accuracy and love of learning were a lesson to us and to all the world; while the simple, kindly, homely life of the real German was exemplary and inspiring. Of late years Germany had been going through the temptations—the greatest for nations as for men—which necessarily accompanied immense wealth and gigantic power, and her ambitions having expanded proportionately, had driven her to provoke the greatest war the world has ever seen. "We, above all other nations," said Dr. Herringham, "we, the race that speak English, whether on this side of the Atlantic or the other, have always fought and struggled and died for humanity, for justice, and for freedom. If these old ideals were still true, and if they represented all that is best in history and in life itself, what could they do less than follow in the path their forefathers had trod?"

The opening meeting of the Middlesex Hospital Medical School was held in the new Bland-Sutton Institute of Pathology. Sir John Bland-Sutton, the donor of the building, presided, and was supported by a large number of the medical staff and others interested in the Hospital. An opening address, dealing with some problems in Psychiatry, was delivered by Dr. O. Hubert Bond. The lecturer pointed out that there was great difficulty in getting suitable medical men for the junior posts in asylums. The crux of the situation lay in the fact that with the gradual increase in the number of appointments the proportion of posts justly regarded as plums had not increased, but had become less and less. Several local authorities, however, were substantially improving the conditions, and they were within measurable distance of seeing the principle accepted that no resident male official whom it was desirable to keep should be debarred either from marriage or other social advantages. Several Universities had instituted diplomas in psychiatry, and the great need now was for the establishment of psychiatric clinics. The evolution of these clinics was a direction in which it was necessary to secure the sympathy and active intervention of the general hospitals. Except for the Maudsley Hospital, he could not call to mind any benefaction for psychiatry. Speciality in general hospitals had come to stay, but the gamut was incomplete without psychiatry. Yet no single general hospital could boast a psychiatric clinic in the full sense of the term. If there were such clinics and out-patients' depart-

ments attached to them he was certain that many a mental breakdown could be prevented. It was the boast of the Middlesex Hospital that they catered for every part of medical science. A gap existed, common to every other general hospital, so long as there was no psychiatric clinic. It would be no departure from its highest and best traditions if the Middlesex Hospital were to lead the way.

The Dean in his report said that the school was in a flourishing condition. Since the war broke out more than 50 of their students had volunteered for service. Some of these were engaged in medical duties, but by far the greater number had enlisted in the fighting units.

At the London School of Medicine for Women, an inaugural oration was delivered by Miss Frances Ivens, of Liverpool.

Miss Ivens chose for her subject "Some of the Essential Attributes of the Ideal Practitioner," the greatest of which she declared to be imagination. From that gift of seeing with the eye of the mind sprang sympathy with and understanding of the patient, and one's fellow-practitioners and fellowmen as well. She advised the medical woman not to forget that she was a woman as well as a doctor, and not to neglect outside interests, and she reminded her that the acquirement of her art lay in practice to which reading is only the footstool. Incidentally Miss Ivens expressed the opinion that out of the experience of the present war, which had taught patriotic women, anxious to help, that usefulness goes with training, there would issue the general view that no young woman should eat the bread of idleness or allow her brain to atrophy. Even from the purely worldly standpoint a training, it proved, was better than the hoard that can be swept away in a financial crisis.

The King's Hospital Fund.

The Hon. Secretaries of King Edward's Hospital Fund issued, towards the end of September, the eleventh annual report, prepared from the published accounts of the various hospitals and convalescent homes with which the Fund has to deal. They state that the institutions dealt with in their report provided a total of 9,171 beds in average daily occupation in 1913, the total number of in-patients admitted being 134,749, while 1,329,567 persons attended as out-patients. The total ordinary expenditure at these hospitals, including maintenance, administration, rent, rates and taxes, but excluding capital expenditure and interest on borrowed money, amounted to £1,058,898. They point out that but for the grants made by this Fund and by the Metropolitan Hospital Sunday and Hospital Saturday Funds the income of the hospitals concerned would fall considerably short of this large annual expenditure. The increase in the cost per bed occupied and per attendance of out-patients, first noted in 1911, has continued, the addition in 1913 representing about £27,000. It is not the object of these reports in any way to discourage expenditure that is held to be necessary in carrying on the work of the hospitals, nor such increases of expenditure as result from modern discoveries or from the efforts continually being made to improve the quality of the work and its range. The object is to assist the hospitals to discover and check, where it exists, any tendency to wasteful or unnecessary expenditure, and thus to enable a still larger proportion of the funds at their disposal to be directed to the maintenance or increase of efficiency.

Personal.

The resignation of Dr. E. F. Bashford, Director of the Imperial Cancer Research Fund, is announced. Dr. Bashford has been in bad health for some little time, and for this reason has felt himself unable to continue his arduous duties in connexion with the Cancer Research Fund.

Dr. John Oswald has removed from Stockinbingal to Barmedman, New South Wales, having succeeded to Dr. Woods' practice.

Dr. Vallintine, Chief Health Officer in New Zealand, who has been on a visit to England, is a passenger by the "Matatua," returning to Auckland.

Dr. W. H. R. Rivers, F.R.S., Lecturer on Physiology of the Special Senses at the Cambridge University, has re-

cently paid a visit to the New Hebrides, and is now on his way to England.

Dr. Robert Thompson, who has been on a visit to Norfolk Island, Samoa and Fiji, returned to Brisbane on January 16, 1915.

Dr. Owen, of Wellington, New Zealand, is at present on a visit to Auckland.

We understand that Dr. R. L. Rosenfield, of Melbourne, proposes confining himself to the practice of eye, ear and nose work.

Dr. May Moffatt, who has been spending a few weeks in Adelaide left on January 11 for Tasmania.

Dr. R. J. Loosli has resumed practice at Camberwell, Victoria.

Dr. W. L. Cleland, the Medical Superintendent of the Hospital for the Insane, Parkside, South Australia, has tendered his resignation. Having arrived at the age of 66, and having served in asylums and mental hospitals for close on 40 years, Dr. Cleland has certainly earned his rest. We hope that he may enjoy good health, and pleasant leisure for a number of years to come. Dr. Cleland was lecturer in psychology some years ago at the Adelaide University, was President of the Mental Science and Education Section of the Australasian Association for the Advancement of Science in 1901, was President of the Royal Society of South Australia from 1898 to 1900, and was President of the South Australian Branch of the British Medical Association in 1890. His work in mental diseases is too well known to need special reference in this place.

Covers for binding the *Medical Journal of Australia* for 1914 can be obtained on application to the Manager, B.M.A. Building, 30-34 Elizabeth Street, Sydney. The price of cloth covers is 2s. and of half leather 3s. 6d.

Obituary.

DANIEL KENNY.

The medical profession in Western Australia has suffered a severe loss in the death of Dr. Daniel Kenny. Dr. Kenny was 55 years of age. He was born in Gorey, county Wexford, Ireland, and studied medicine in Dublin. His career as a student was marked by many distinctions, including a gold medal and first-class honours. He qualified in 1883, and spent the first two years of his professional life as a ship's surgeon. In 1885 he settled in Perth, and, as a result of his knowledge of men and medicine, of his *savoir faire*, and of his charming personality, his practice became an extensive one. He became a member of the first board of management of the Perth Public Hospital, and also of the Medical Board of Western Australia. At a later date he entered into partnership relations with Drs. McWilliam, Trethowan, and Officer. He retired from practice a few years ago. He leaves a widow, five daughters, and two sons. The elder son, Dr. Joseph Kenny, is at present attached to the Fourth Field Ambulance in the Australian Expeditionary Force.

Proceedings of Australasian Medical Boards.

NEW SOUTH WALES.

The following persons have been registered under the provisions of the "Medical Practitioners Act of 1912" as duly qualified medical practitioners:—

Dean, Arnold William, M.B., 1914, Univ. Sydney.
Gaden, Keith Burton, M.B., 1914, Univ. Sydney.
Grey, Francis Temple, M.B., 1914, Univ. Sydney.
Jamieson, James Ian Munro, M.B., Mast. Surg., 1914, Univ. Sydney.
Nye, Leslie John Jarvis, M.B., 1914, Univ. Sydney.
Waldron, George Dibbs King, M.B., 1914, Univ. Sydney.
Strachan, James Charles Power, M.B., Bac. Surg., 1914, Univ. Adelaide.

For additional registration:—

Davis, Thomas Richard Earls, Mast. Surg., 1914, Univ. Sydney.
Finlay, Donald Francis, Mast. Surg., 1914, Univ. Sydney.
Power, John Joseph, Mast. Surg., 1914, Univ. Sydney.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenens sought, etc., see "Advertiser," page xi

Stannary Hills Hospital, Medical Officer.

Thargomindah Hospital, Medical Officer.

Victorian Eye and Ear Hospital, Resident Surgeons.

Diary for the Month.

- Feb. 9.—Tasmanian Branch B.M.A., Annual General and Council Meetings.
- Feb. 10.—Melbourne Pediatric Society.
- Feb. 11.—Victorian Branch B.M.A., Council Meeting.
- Feb. 12.—Balmmain District Medical Association, Annual Meeting.
- Feb. 17.—Western Australian Branch B.M.A., Branch Meeting.
- Feb. 17.—Victorian Branch B.M.A., Clinical Meeting.
- Feb. 19.—Queensland Branch B.M.A., Council Meeting.

Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
QUEENSLAND. (Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane).	Brisbane United F.S. Institute. F.S. Lodges at Longreach. F.S. Lodges at Warwick.
WESTERN AUSTRALIA. (Hon. Sec. 230 St. George's Terrace, Perth).	Swan District Medical Officer. All Contract Practice Appointments in W.A.
NEW SOUTH WALES. (Hon. Sec. 30-34 Elizabeth Street, Sydney).	Australian Natives Association. Balmmain United F.S. Dispensary. Burwood District F.S. Institute. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney. N.S.W. Ambulance Association and Transport Brigade. N. Sydney United F.S. People's Prudential Benefit Society. Phoenix Mutual Provident Society. F.S. Lodges at Braidwood. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Mudgee. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, and Auburn. F.S. Lodges at Wellington. Killingworth Colliery, Newcastle. Seaham Colliery No. 1, Newcastle. Seaham Colliery No. 2, Newcastle. West Wallsend Colliery, Wallsend.
SOUTH AUSTRALIA. (Hon. Sec. 3 North Terrace, Adelaide).	The F.S. Medical Assoc. Incorp., Adelaide.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to the "Medical Journal of Australia" alone, unless the contrary be stated. All communications should be addressed to "The Editor," "Medical Journal of Australia," B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.